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EDGE

PlayStation ■ Saturn ■ Nintendo 64 ■ PC ■ Arcade ■ Net ■ Multimedia ■ CGI

64DD

Nintendo bulks up at **Shoshinkai**







DMA Design

Gamespotting with Scotland's **finest**

N64

NCL's revival of the **fittest**

Yaroze

Black to basics for Sony?

The cultivation of new programming talent is one of the biggest problems facing the videogame industry today. Sony, however, thinks it has a solution. Will its revolutionary Yaroze system really bring new blood into the development community, or is it little more than a white elephant?

Issue forty-one

Future

January

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The revelation that Sony is about to unleash its DIY PlayStation programming system, Yaroze, upon the European videogaming community has been overlooked by many, yet it remains a development with the potential to change the face of videogaming forever.

This issue, **Edge** looks at the system in detail and examines the implications it presents to what many see as a stifled and stagnant industry.

What will the £550 outlay buy the budding 32bit console programmer? What will he be able to do once he's taken the plunge? And what is Sony's real commitment to the project? The answers begin on page 68.

The future is almost here...







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Nintendo's mass-storage 64DD peripheral







Photography: Steffhan Caddick



Star Fox 64


Virtua Cop 2



Shadows of the Empire



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THE LATEST NEWS FROM THE WORLD OF INTERACTIVE ENTERTAINMENT

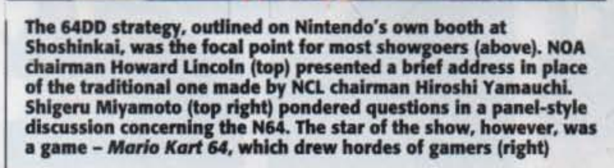
Mixed reception for Nintendo at Shoshinkai

Nintendo has finally shown its 64DD peripheral for the N64 – but where were the games?









The 64DD strategy, outlined on Nintendo's own booth at Shoshinkai, was the focal point for most showgoers (above). NOA chairman Howard Lincoln (top) presented a brief address in place of the traditional one made by NCL chairman Hiroshi Yamauchi. Shigeru Miyamoto (top right) pondered questions in a panel-style discussion concerning the N64. The star of the show, however, was a game – *Mario Kart 64*, which drew hordes of gamers (right)



Shudder



Nintendo's **Jolting Pack add-on fits into the underside of the N64 joypad. The device, which uses a solenoid to create a juddering sensation in correspondence with on-screen action, is presently compatible with *Star Fox 64* and *Blast Corps* (below).**





The 64DD peripheral fits snugly beneath the N64 and is, naturally, styled in a fashion in keeping with the base unit's colour and shape. Its disks are surprisingly compact

The future of the Nintendo 64 became clearer at the eighth annual Shoshinkai Exhibition in Tokyo, where 47 software titles were confirmed for the Japanese market and the long-awaited 64DD mass-storage device made its debut in near-complete form.

Although the event, held on November 22–24 at Makuhari Messe, was regarded by many as disappointing – chiefly because key title *Zelda 64* failed to make an appearance in playable form – there were many promising aspects, not least of which were playable versions of *Mario Kart 64* and *Star Fox 64*.

It was the 64DD that drew most attention, though, with Nintendo's sleek new peripheral taking pride of place – from within the confines of a glass box, naturally – on its typically substantial stand. Without game software to accompany it, however, it was left to a demo custom coded for the event to attempt to hint at the drive's capabilities. It did this by mapping photographs of attendees onto the sides of rotating cubes, displaying the results on giant screens, producing a twee taster of the unit's potential (especially for those showgoers eager – or sad – enough to wait around and catch their own fizzogs being thrown around onscreen), but hardly the glorious demonstration that many were rightfully expecting.

Instead, *Zelda 64* was, like many other games (including the gorgeous-looking *Yoshi's Island 2* and *Mother 3*), shown only briefly on video. Alhough the game is still in its infancy, the evidence was nevertheless promising, with Link's polygonal world looking unsurprisingly similar to that of *Super Mario 64*, and realtime combat sequences that bode well for the quality of the finished product.

Only too aware of the criticisms levelled at its modular approach to hardware design, as well as at its choice of storage format in the face of its rivals' continued ►

64DD specs

Size: Drive – 260mm(w)x 190mm(d)x78.7mm(h); disk – 101mm(w)x130mm (d)x10.2mm(h)
Weight: Drive – 1.6kg; disk – 43g
Memory capacity: 64 megabytes (approx.) of which approx. 32 megabytes are writeable
Sustained data transfer rate: 81 for 64 megabytes (approx.)
Seek time: Typically 75ms (approx.)
Motor driving time: Less than 1.9 seconds
Miscellaneous: Data correction feature included as standard
Media: Magnetic, high-density, doublesided disk



Who is it?

This famous businessman, owner of one of the biggest videogame publishers in the UK, recently dressed as a bride to promote his new 'wedding' division





Some N64 games on display at Shoshinkai were hardly *Mario*-like in their simplicity of control. Fortunately there were assistants on hand to help out with titles such as *Turok* (above) and *Blast Corps* (right)



Nintendo's press-day conference was a PR-led affair, but raised some interesting points





Makoto Tezuka, director of Tezuka Production, joined Shigeru Miyamoto in discussing new N64 title *The Great Emperor of Jungle*

Jungle fever

Nintendo also used Shoshinkai to announce its co-operative deal with Japanese animation house Tezuka Production for the production of an N64 title called *The Great Emperor of Jungle*.

Tezuka Production, which has produced such classic slices of anime as 'Astro Boy', will provide the visual and aural content of the 128Mbit game, which is slated for release in Spring 1988.

it is...

Richard Branson, owner of VIE. If the stunt proved an important lesson, it was that one of the things money simply cannot buy is the ability to look good in a dress

reliance on CD, Nintendo dedicated the afternoon of the exhibition's press day to a panel-style discussion session which, among other aims, represented an attempt to defend its current cartridge-based software strategy and outline the benefits and potential of the 64DD system.

Super Mario 64 project director Shigeru Miyamoto and a sprinkling of hand-picked Nintendo cohorts – including representatives from Konami, Seta and Imagineer – took centre-stage to chew over various N64-related topics in front of a packed audience.

Konami's *J-League Perfect Striker* was cited as one example of silicon's superiority as a storage medium, with delegates claiming that the spectacular amount of animation in the game – which betters its existing 32bit peers by a considerable margin – would have been impossible on a system with an optical storage device.

The 64DD issue, meanwhile, was tackled with a spiel about its capacity (64 megabytes, up to 32 of which are available for writing to during play), swift access times and a flexible achitecture, which leaves the N64's cartridge slot free for cartridge-and-64DD game packages (which, incidentally, is the format Nintendo is rumoured to be adopting for *Zelda 64*). Having recently dubbed the N64 'The Evolving Video Game Machine' in its official press material, it became clear that Nintendo has invested heavily in laying foundations for the future of its premier format.

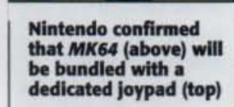
No one was left in any doubt that the discussion – which replaced the traditional address from NCL chairman Hiroshi Yamauchi – was a PR-oriented affair. The arrangement whereby the dedicated host posed (undoubtedly predetermined) questions to an expectant panel was a fairly translucent affair, but the points made were nevertheless thought-provoking and underlined Nintendo's undying commitment to its agenda – whether it flies in the face of generally accepted common sense or otherwise.

Ironically, Nintendo's traditional emphasis on gameplay over any other aspect of videogaming was contradicted by the lacklustre nature of a significant number of titles revealed to an expectant audience elsewhere in the hall.

Several games, including *Doraemon*, *Blade and Barrel* and *St. Andrews*, proved that, no matter how powerful the silicon behind the software, unspectacular N64 product remains a real possibility. There's no doubt that the thirdparty software on which Nintendo has deliberately maintained a short leash is among the N64's most promising titles for 1997, yet there remain a number of games which, on the evidence of their showing at Shoshinkai at least, could further damage the machine's reputation as a triple-A platform following the disappointment of US-developed titles such as *Mortal Kombat Trilogy* and *Cruis'n USA*.

Mario Kart 64 was the undoubted star of the show in software terms, luring hundreds of showgoers to patiently join the queues which snaked back from the many demonstration N64 units greeting visitors as they entered the Messe's cavernous interior. Carrying on the flavour of the SNES title with plenty of style, the 64bit update retains the original's slippy-slidey feel but adds countless new gameplay





Nintendo confirmed that *MK64* (above) will be bundled with a dedicated joypad (top)

NCL's N64 software line-up

Blastdozer • Nintendo • March '97
GoldenEye 007 • Nintendo • TBA
Kirby's Air Ride • Nintendo • TBA
Mario Kart 64 • Nintendo • Out now
Mother 3 • Nintendo • TBA
Starfox 64 • Nintendo • March '97
Star Wars: Shadows of the Empire • Nintendo • TBA
The Great Emperor of Jungle • Nintendo • Spring '98
Yoshi's Island 64 • Nintendo • TBA
Turok: Dinosaur Hunter • Acclaim Japan • March '97
Virtual Pro Wrestling • Asmik • February '97
Pro Mah Jong Kiwame 64 • Athena • January '97x
Pro Baseball King • Imagineer • Out now
Holy Magic Century Eltale • Imagineer • April '97
J-League Dynamite Soccer 64 • Imagineer • February '97
Go! Go! Trouble Makers • Enix • March '97
Wonder Project J2 • Enix • Out now







A Japanese software exhibition wouldn't be complete without these essential components

traits to offer an experience that will comfort yet refresh Nintendo devotees of old.

Star Fox 64, meanwhile, broke new ground with extravagant graphics that surpass anything ever seen in home videogaming. Stuffed with elaborate realtime cut-scenes, the game (which NCL has developed solely in-house, without the assistance of UK-based Argonaut Software, the coders of the Super FX-driven SNES original) retains, like *Mario Kart 64*, much of its forebear's gameplay, while expanding upon them significantly, most notably with a land-based tank combat mode.

As well as being the most visually impressive title on display, the game debuted Nintendo's latest hardware development, the 'Jolting Pack'. This peripheral plugs into the N64 controller's expansion port (previously believed to exist merely for memory cards) and generates vibrating sensations corresponding with the onscreen action (when the player's ship takes a hit, for example). A low-end equivalent to the kind of experience offered by coin-op driving games such as *Sega Rally*, the add-on was seen by many as merely another whimsical Nintendo fancy destined for the bin marked 'Good Idea at the Time'.

Blastdozer, from *Killer Instinct Gold* creator Rare, was the only other title to make use of the peripheral – reinforcing the already-strong links between Nintendo and the UK-based softco. However, despite its graphically strong showing, the game proved to be a quite lackadaisical experience.

Of the promising thirdparty software – whether displayed on video or otherwise – **Edge** was most impressed by Konami's *Goemon 64* (which, although viewable only as prerendered footage, should carry the quality hallmarks for which its developer is famed); Enix's *Go! Go! Trouble Makers* (an unashamedly 16bit-styled platform game with gorgeously over-the-top 64bit touches from acclaimed codeshop Treasure); and Acclaim's *Turok: Dinosaur Hunter* (featuring a wondrous selection of breathtaking firepower).

Behind the overwhelming fanfare of 64bit software lay a clutch of SNES cartridges, with Nintendo's own SA1-powered Satellaview-compatible angling extraganza *Bass Fishing No.1* joining the likes of Capcom's *Street Fighter Alpha 2*, Hudson's *Super Bomberman 5* and Enix's *Dragon Quest 3* in an effort to keep the 16bit fires burning. The Game Boy's continued popularity in Japan was confirmed by the apppearance of several new cartridges for the machine, including Nintendo's second *Gallery* game, resurrecting four more Game & Watch titles.



Konami led the way in thirdparty software terms with its sparkling N64 debut, *J-League Perfect Striker*, a football game of top quality

Although Nintendo expended a lot of energy hammering home a message of reassurance to N64 devotees, there were numerous disappointments which left showgoers feeling short-changed. The appearance of the 64DD in the flesh made the event worthwhile for some, but the absence of a truckload of games – whether delivered on silicon or in magnetic-disk form – to measure up to the brilliance of *Mario 64* is one aspect that Nintendo cannot ignore, and the company will have to take measures to rectify the situation if the N64 is to maintain the strength it showed at launch.

ALTHOUGH NINTENDO EXPENDED A LOT OF ENERGY HAMMERING HOME A MESSAGE OF REASSURANCE TO N64 DEVOTEES, THERE WERE NUMEROUS DISAPPOINTMENTS

Doraemon (working title) • Epoch • March '97
J-League Live 64 • EA Victor • Out now
Hexen • Game Bank • January '97
Blade and Barrel • Kotobuki System • Out now
Mah Jong 64 (working title) • Koei • TBA
Goemon 64 • Konami • TBA
Powerful Pro Baseball 4 • Konami • TBA
Mah Jong Master • Konami • TBA
J-League Perfect Striker • Konami • TBA
Rev Limit • Seta • February '97
Wild Choppers • Seta • January '97
Super Real Island • Seta • May '97
St. Andrews • Seta • Out now
Like Thunder 'GO' • Seta • January '97
Morita's Shogi 64 (working title) • Seta • May '97
SDF Macross (working title) • Tomy • May '97
Cavalry Battle 3000 • Japan System Supply • November '97
Chameleon Twist • Japan System Supply • November '97
Power League 64 (working title) • Hudson Soft • TBA
Dual Heroes • Hudson Soft • TBA
Pro Wrestling Game (working title) • Hudson Soft • TBA
New Bomberman • Hudson Soft • TBA
New Hagane (working title) • Hudson Soft • TBA
Super Robot Spirits • Banpresto • 1997
Mission Impossible • Victor Interactive • April '97
Sonic Wings Assault • Video System • TBA
Mah Jong (working title) • Video System • TBA
Human Grand Prix • Human • Out now
64 Sumo (working title) • Bottom Up • May '97

What is it?

This overtly multimedia-conscious 32bit home entertainment system was a major-scale launch from one of the biggest electronics companies around. It flopped

3Dfx reveals new **high-end** PC **accelerator**

The Obsidian XS-100 offers power to accelerate PC systems to their highest level to date

Obsidian specs

Custom features
- **100 megapixel-per-second, trilinear filtered texture mapping**
- **4Mb of frame effective buffer memory**
- **8Mb of effective texture memory**
- **Trilinear fill rate performance online with Real3D Pro 1000 or SGI Impact**

Basic 3D features
- **Perspective correction**
- **Sub-pixel and sub-texel correction**
- **Depth buffering**
- **Alpha blending**
- **Tri/bilinear filtering**

Advanced Voodoo features
- **Environment mapping**
- **Texture morphing**
- **Texture animation**
- **Video texture mapping**
- **Per pixel fog**

It is...

The Philips CD-i. Once upon a time considered a major component in the multimedia revolution, the unit now languishes in the same pit occupied by the 3DO

The company responsible for the highly impressive Voodoo graphics chipset, 3Dfx, has announced a new state-of-the-art board to head the company's Obsidian range of professional realtime PC graphics accelerators. According to 3Dfx, Obsidian XS-100 is the highest-performance graphics accelerator in existence.

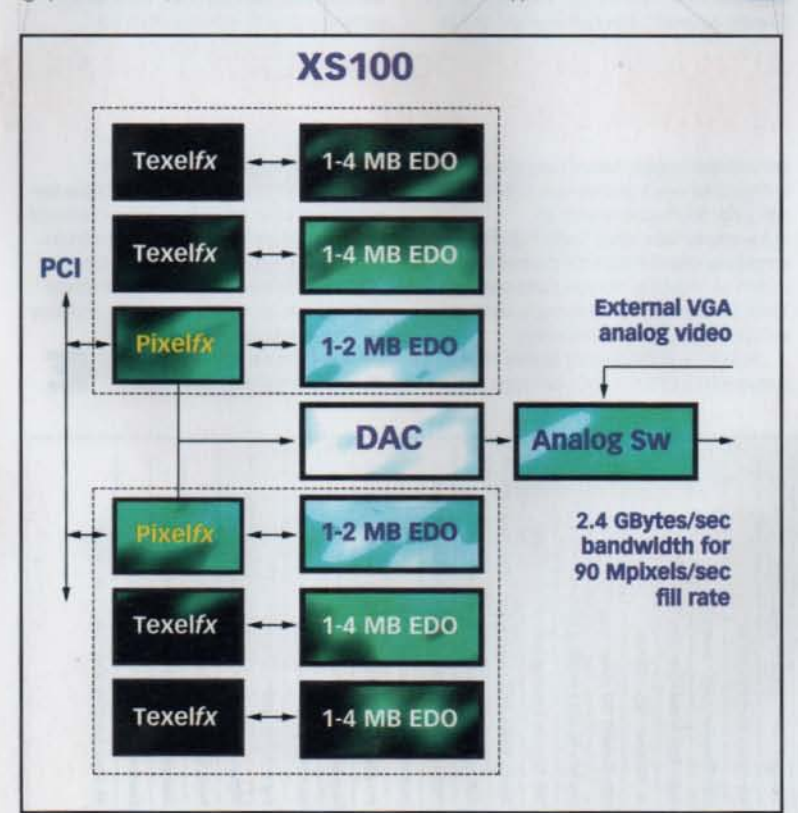
The product certainly sounds powerful. 3Dfx claims a trilinear fill-rate performance on par with Real3D Pro 1000 or SGI Impact, and this is in a PC-based solution which, as Ross Smith, general manager of 3Dfx Interactive's System Products Division points out, 'costs $5,000 instead of $50,000.'

As with all other 3Dfx graphics initiatives, the XS-100 is based around 3Dfx's basic Voodoo chipset – the same one found in consumer boards like Orchid's Righteous 3D. As Smith explains, 'We designed the Voodoo graphics architecture to span the entire range of the realtime 3D market – from the PC games enthusiast to coin-op systems to simulations.' However, unlike the consumer 3Dfx boards which use just one Pixel FX (graphics controller) unit and one Texel FX (texture processing) unit, The XS-100 features four Texel and two Pixel units. Therefore, it boasts three times the trilinear fill-rate performance of consumer boards.

Given this higher performance (and the higher price point, of course), the main customers for the product are expected to be military and civilian sim developers. 3Dfx hopes that these users will employ PCs with XS-100 to develop products instead of using expensive workstations.

However, although sim developers are cited as the main target for XS-100, the arcade has been an important part of 3Dfx's gameplan since the Voodoo chipset was first developed and it's unlikely that this area will be neglected with the new Obsidian board. The original Obsidian, announced in March '96, soon attracted attention as a highly attractive coin-op solution, mainly becuase of its status as a customisable, low-cost scaleable system.

No coin-op developer has yet pledged support for the XS-100, but, considering its power and the popularity of previous Obsidian technology, it probably won't be long before it happens.



Obsidian Pro

3Dfx has also recently revealed details about another Obsidian card, this time aimed at artists who use 3DStudio and 3DS Max. The Obsidian Pro, complete with 3DS plug-ins, should be released in the first quarter of '97. For more info visit http://www.3dfx.com

DATA STREAM

Number of N64s sold in Japan: **800,000**
Expected installed base in Japan by Jan '97: **1.3m units**
PlayStation worldwide sales: **7.2m**
Japan installed base: **3.5m**
US installed base: **2.1m**
European installed base: **1.6m**
Worldwide unemployment figure: **8bn**
3DO Company net income for 2nd quarter of '96: **$6.8m**
Silicon Graphics 1st quarter operating profit '96: **$18m**
The maximum continuous time logged by a single *Meridian 59* beta tester: **26 hours**
Number of virtual weddings which have taken place in the game: **20**
Number which have ended in divorce: **2**
Number of reconciliations following divorces: **1**
Britain's position in the world literacy league table '96: **16th**
According to Jupiter Communications, estimated number of households with Net access by the year 2000: **66m**
VideoLogic turnover in six months up to September 30, 1996: **£7.3m**
Net loss over same period: **£1.2m**
Annual losses caused by piracy to European business software developers: **$4.4bn**
Number of Intel Employees at end of '95: **41,600**
Number hired during '95: **9,000**
Number of active FBI special agents: **10,529**

Saturn/PS sequels **beckon**

Early details of plans for Saturn 2 and PlayStation 2 give gamers a glimpse of the future

Possible specifications for the Saturn 2 and PlayStation 2 have been speculated to **Edge** by respected sources, giving tantilising, albeit vague, technical info.

The 64bit PlayStation follow-up is apparently being developed in the west coast area of the US by former members of Argonaut. The new hardware allegedly uses a 4-speed CD-ROM drive and will have a larger RAM capacity than the existing PlayStation. It's said the machine will include a custom R4000 chip and will also be able to play DVDs (digital video discs). Because of the success of the PlayStation, the PlayStation 64 is unlikely to appear before 1998 and, to encourage upgrading and maintain customer loyalty, it's likely to be compatible with the 32bit machine.

Details on the Saturn 2 are more sketchy at this stage, but the console is said to be designed to utilise either a 6- or 8-speed CD-ROM drive and have a modem built in as standard. The latter feature would certainly be in line with Sega's current determination to promote the Saturn as a communications machine as well as a gaming console (see Netview, page 15). Prices are currently unavailable for either machine, obviously.

Further hardware upgrades to the existing Saturn and PlayStation systems are also slated to appear in 1997. Sega is presently developing an add-on board for the Saturn that will let owners play a respectable version of *Virtua Fighter 3*. This will probably take the form of a PowerPC board that will enable the Saturn to simulate Sega's Model 3 technology.

Meanwhile, Sony has unveiled a new white PlayStation, complete with matching white joypad, specifically for the South East Asian market. The major difference between it and existing PlayStations is its ability to play MPEG CDs using a chipset developed by specialist compression firm Xing. The market for MPEG movies is vast in some Asian countries with feature films, anime and pornography all delivered on the format, and Sony obviously feels the white PlayStation will give it a share of this lucrative market. The machine will also include extra chip-based security in an attempt to curb the piracy that is rampant in certain Far East territories.

The white PlayStation is set for a spring 1997 release with an as yet unconfirmed price tag of $279.

BT Gets Wired

BT has enthusiastically declared its Wireplay multigamer network a total success. The service, which launched two months ago, attracted 50,000 callers in the first month of full availability. There are now 7,000 registered users.

Amendments have recently been made to Wireplay as a result of feedback from Beta testers. Significantly, the daytime play rate has been reduced to 6p per minute, while the evening and weekends rate is now 2.5p per minute. Call 0800 800 918 for further details.

Pippin launches in **US**

Apple's ambitious multimedia platform finally reaches the market

Bandai's PowerPC-based Pippin @World entertainment system has finally seen the light of day in the US. Priced at $499, the system is being targeted squarely at the family market, steering well clear of gamers. The real emphasis is not so much on entertainment capabilities, but on the provision of cheap Internet access via the built-in Motorola 28.8 modem. The Pippin contains its own browser and CD-ROM drive and may be expanded to accommodate printers, keyboard and extra storage. The original white design was dropped by Bandai in favour of a more austere-looking hi-fi black (the European version will be different again). It remains to be seen whether the Pippin will prove a success, or suffer a similar fate to Philips' recently discontinued CD-i. **Edge** will look at this latest piece of hardware in detail next issue.



The Pippin's original white design (above) has been ditched in favour of a more sophisticated set-up (right). Internet access is its strength

(out there)

REPORTAGE FROM THE PERIPHERY OF THE VIDEOGAMES INDUSTRY

Shock Tactics

As strange as it may seem, videogames have never been entirely popular with Britain's moral guardians. The Daily Mail, that fine and upstanding newspaper, ran a story in 1993 which described *Night Trap* (an unremarkable Sega Mega CD game) as a 'SEGA SICKENER'. Not to be outdone in the tabloid quest for righteous indignation, The News of the World recently ran the headline 'VIRTUAL REALITY TRAPPED OUR SON IN A HORROR WORLD', referring to the coin-op, *Cruis'n USA*.

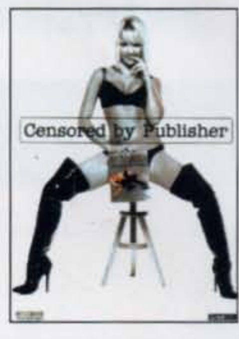
Now the videogame industry is back in the media spotlight, only this time it's advertising that's getting all the bad press. The Advertising Standards Authority claims that complaints over videogame ads have reached record levels following a number of recent 'shocking' ads from the likes of Virgin, Gametek, Interplay and Hasbro Interactive. The situation reached a head – and the TV news – recently when Future Publishing refused to run an advert for PC CD-ROM title *Risk* featuring the phrase 'Fascism Rules'. 'I don't agree that Fascism rules,' publishing director Jane Ingham told CTW. 'I find that offensive and I think a majority of our readers would find it offensive too.' And so the argument began.





This isn't the first time 'offensive' ads have made the mainstream media. Last year Virgin had its knuckles rapped over an ad for PC racing game *Screamer*, which featured a burnt-out car wreckage below the slogan, 'Every Christmas the roads are full of mad men. Join them'. Its billboard ads for *Command and Conquer* included pictures of several dictators along with the headline 'Previous High Scorers' – another campaign that caused brief public outcry.

At the time, many of Virgin's ads were deemed witty. Now, though, some are claiming that the shock-tactics situation has become unnecessarily epidemic, with almost every publisher trying its hand. Interplay has featured a teddy bear with its guts hanging out in an ad for *Disruptor*, Gametek recently used Joanne Guest straddling a copy of *Battle Cruiser 3000* and Studio 3DO even went so far as to use a pair of bull's testicles in a recent campaign. In fact, an entire culture seems to be growing around the 'shock' phenonema: Konami recently 'paid homage' to Virgin's brilliant *Resident Evil* ad (see picture, top) with its own bath-full-of-blood campaign for *Project Overkill* and T•HQ has recently run an ad parodying Gametek's Joanne Guest effort (see picture, left). Nowadays it seems an ad is shocking if it doesn't feature semi-naked page-3 girls, xenophobia or cuddly teddies with bullet wounds. GT Interactive's *Quake* campaign, for example, contained images of wholesome – albeit somehow unsettling – family scenarios and delivered a clever and prominent twist on expectations.









Predictably, the Advertising Standards Authority takes a dim view of the current trend. Although it does not seek to censor ads, it's currently preaching caution. The ASA's Graham Fowler recently claimed that 'short-term sensationalist tactics prove counter-productive and actually turn consumers off.' He went on to suggest that if things don't change, the industry will face government legislation and game ads could end up being banned altogether.

The situation has certainly worried the European Leisure Software Publisher's Association. It is considering setting up a vetting council to which all members will have to submit their ads. This idea has met resistance both from within the videogame industry (Virgin has threatened to pull out of ELSPA if the vetting idea goes ahead) and from the ASA itself. The latter feels the current arrangement should suffice: this involves advertisers submitting their campaigns to the Committee of Advertising Practice (a branch of the ASA) which can advise companies on advertising law.

Although no one in the videogame industry is particularly excited about jumping into bed with the PC moral indignation crew, many companies realise that it could be only a matter of time before ads like Gametek's are held up by some rabid Tory MP in parliament. Then, the censorious head of parliament may well turn toward the videogame industry and it can wave goodbye to the likes of *Quake*, *Virtua Cop 2*, *Resident Evil* and a host of other great games. The irony is, it will mostly be the fault of companies like Gametek and Hasbro – hardly bastions of software quality. Proof, perhaps, that some ironies, just like some shocking ads, simply aren't funny.

(out there)

Attik Attack





Staid, dull, dated and lifeless, with too much airbrushing. This is how design company Attik sums up the majority of videogame packages. Take one look in Electronics Boutique and you know they're right. Clichéd images, poor drawings, terrible photos: these are all too common – even if the games within are competent. Fortunately, Attik is one company dedicated to combatting this blatant formula fatigue.

To be honest, an outfit that began working on Yorkshire Electricity direct-mail campaigns doesn't sound like the sort of team capable of producing brash, new and innovative videogame packaging. However, James Sommerville and Simon Needham actually established their company in Sommerville's grandmother's attic in Huddersfield – a low-key beginning similar to many British software houses. There is, then, a natural affinity. Also, as accounts manager Alex Murray points out, 'The people at Attik love all things computer-oriented, and spend hours playing videogames – all in the name of research, of course. It seemed like a natural progression to start speaking to major manufacturers like Sony, in order to give their game packaging the Attik "treatment"'.

Attik has now designed dozens of game packages including *Tekken*, *Ridge Racer Revolution*, *Soul Edge* and *Toshinden 2*. Importantly, the company's work strongly reflects its obsession with state-of-the-art design technology. All of its packaging is dynamic, well-crafted and, most importantly, tuned in to Sony's 'cooler than thou' philosophy: 'The Attik produces designs that are visually stimulating, have shelf presence and use an array of different graphic design techniques and print material,' says Murray. 'Much of our point-of-sale material for *Crash Bandicoot*, for example, uses vibrant orange fur. We wanted to move away from bog-standard two-dimensional images.' As for the future, Attik is continuing its ties with Sony and has several projects lined up. It's also opening a new office in New York. Which is slightly, but only very slightly, more glamorous than Huddersfield.



The Cult of Lara Croft

The star of *Tomb Raider*, Lara Croft, has become something of an icon in recent months. This may be partly because PlayStation games, though almost exclusively aimed at twenty-something males, have never had a leading female game character of any substance before. Lara, with her pistol-shooting, acrobatic antics, is re-writing the rules for action heroes of any gender.

Not surprsingly, Eidos Interactive is doing all it can to fuel the Lara fire. The company is using real models in advertising and on magazine covers, and there's even a deal in the offing to bring Lara to Saturday-morning TV as a cartoon – a route that certainly worked for Shiny's substantially less attractive Earthworm Jim.



Cool Band Fluke



Much has been written about developers using credible music to lend kudos to their games (see **E**36), but now the situation seems to be reversing. 'Atom Bomb', a track by techno act Fluke which appeared on the *Wipeout 2097* soundtrack, recently entered the national charts at 20, giving the band its biggest commercial success to date.

And there was no way music lovers were going to be allowed to miss the track's videogame origins. In an effort to bang home the *Wipeout* connection, the CD single's cover features a manga-esque representation of Arial Tetsuo – a pilot from the original *Wipeout* game (see picture). The track's video also includes an array of *Wipeout 2097* game and rendered images, as well as a story based around Tetsuo. It's official, then: videogames really are hip.

BIG IN JAPAN

• THIS MONTH...
• PCBs AT HOME
• DVD DRIVES
• TOYOTA RALLY
• CAPCOM GOES N64

IT'S COMMON KNOWLEDGE THAT JAPAN IS THE VIDEOGAME CAPITAL OF THE WORLD. WITH THIS IN MIND, EDGE PRESENTS A NEW MONTHLY COLUMN CHRONICLING ALL MANNER OF ASPECTS FROM THE NIPPONESE VIDEOGAMING SCENE

Coin-op shopping, Akihabara-style

In Akihabara, the district of Tokyo described by the exit of its tube station as 'Electric Town', the otaku can find just about everything he or she could wish for, from fan-produced manga and PC games (many of which borrow characters from official games – a particular favourite being Chun Li, for some reason) to tiny LCD *Tetris* rip-offs, and it is here where those seeking a true coin-op experience in the home come to get their fixes.

In among the shops selling DVD players and hi-fi systems are videogame outlets that specialise in secondhand arcade boards, stacking the bubble-wrapped components from floor to ceiling and offering everything from oldies such as *Super Cobra* to very recent games.

With the recent arrival of Sega's Model 3 board, thousands of Model 2s have been discarded by arcade operators and have found their way to the secondhand market. *Virtua Fighter 2* boards are now common sights in specialist stores, clocking in at ¥98,000 (£530). At the higher end of the market, *Virtual On* – a game that is still doing good trade in Japanese arcades – retails for around ¥300,000 (£1,620).

To get such a board working in the home, users have to purchase a Super Gun-like controller box, joystick controllers and cables, which sets them back around ¥30,000 (£160). The set-up can be used with all JAMMA-compatible boards with a standard television set.

For those totally commited to turning their abodes into arcade-style dwellings, complete coin-ops can also be purchased – companies regularly advertise such set-ups in Japanese arcade-game magazine Gamest. A complete *VF2* costs around ¥350,000 (£1,890) while *Last Bronx* units are ¥420,000 (£2,270), with prices currently dropping dramatically. Surprisingly, Capcom's CPSIII system (which powers *Warzard* and is also used in the forthcoming *Street Fighter III*) is already in the shops, forcing the price of CPSII units down. The base CPS units, which work very much as Neo Geos do in their coin-op incarnations, simply require Capcom cartridges to be plugged in. So, fancy a bona fide original copy of *Street Fighter II Turbo* in your home? Shop around and you could pick up a CPSII-compatible cart for ¥1,300 (£7).

Writeable DVD drives debut at Tokyo Electronic Show

The Tokyo Electronic Show '96 took place in October, showcasing all that is new in Japanese multimedia, television, hi-fi and electronic products to a naturally eager audience.

The biggest exhibition of its kind in Japan, the show presented the wares of no less than 636 exhibitors, with DVD players taking pride of place among many of the stands, including some that herald the dawn of PC/DVD compatibilty.

Though all DVD decks so far released in Japan feature only 'play' functions – recordable systems have yet to reach the market – both Panasonic and TDK introduced prototypes of a new type of DVD drive – DVD-RAM. These drives offer the potential to write to disk and, although it's not yet clear when such devices will be released, versions compatible with, say, M2, could offer serious competition to the likes of Nintendo's 64DD system.

Toyota rallies with Sega at Joypolis

Sega has opened its new Joypolis game park on the tenth and 11th floor of Takashimaya Times Square, a gigantic new department store which opened in the preposterously busy Shinjuku area of Tokyo in October.

Much like Sega World at London's Trocadero, Joypolis gathers several different attractions aimed at presenting novel experiences to attendees. The big attractions, however, are two real Toyota cars mounted on hydraulic movement systems and wired up to *Sega Rally Championship* coin-op hardware. The ultra-realistic experience has ensured that constant queues form behind the attraction, with players shelling out ¥600 (£3) for a oneplayer game and ¥1,000 (£5) for a head-to-head twoplayer experience.

Capcom reveals first Nintendo 64 project

In a recent visit to Capcom's development HQ, **Edge** witnessed an early version of its first N64 title, a *Mario 64*-alike featuring *Ghosts 'n' Goblins* characters. More next ish...











Specialist stores stock hundreds of PCBs (above left), and the latest include the super-pricey *Virtual On* (left). Home users looking to maintain their units can buy replacement joystick knobs and fire-buttons







The Tokyo Electronics Show '96 provided an exposé of the latest in DVD technology including DVD-ROM players (centre) from several electronics companies. A prototype DVD-RAM player also put in an appearance (left)

Saturn in cyberspace

So the Saturn is just a games machine, is it? Not according to Sega, which wants to turn the machine into a multimedia tool…

For many years, online multimedia entertainment has been the preserve of the home computer, with console experiments such as Nintendo's Satellaview failing to spur on much similar experimentation outside of Japan. But that may be about to change. The Internet has become a global rather than a niche market and Sega of Japan, keen to get in there and start exploiting, has set up a dedicated multimedia department at its Tokyo HQ. Its mission? To bring network services such as the Internet, Nifty-Serve and X-Band to the Saturn.

'We established the new department last August and we are totally independent from the domestic consumer division,' explains **Hideaki Sasaki** of Sega Multimedia. 'We believe that multimedia is going to be a big market so, using the Saturn as our platform, we are trying to develop a completely new business.'

The videogame giant's new enterprise has certainly moved fast. Sega entered the world of Internet communications just six months ago with the release of its modem peripheral in Japan. This device, which plugs into the Saturn's cartridge slot, comes complete with Net-browser software allowing users to surf the Internet via a TV. The modem can also be used to access Nifty-Serve – a Japanese PC network service similar to CompuServe. Saturn owners cannot play games over Nifty-Serve but, with a piece of software called 'Habitat', they can access an online interactive world and take part in Sega-themed discussions. Sega has also developed a new improved version of Habitat (Habitat II) with Fujitsu.

The Saturn's perceived limitations as a console are not being allowed to get in the way of its multimedia pretensions. Sega has released a keyboard enabling users to send email, and a floppy drive on which they can be stored. The company is also keen to reach non-gamers. Speaking about Sega Of Japan's website, Sasaki told **Edge**: 'There is info about games, of course, but we also want to talk about movies, music and general entertainment.'

X-Band is another area Sega is exploiting, through a private multiplayer gaming network rather like BT's Wireplay. Players with an X-Band-compatible game connect to the server, which then connects them with an opponent. Gamers will also need a 'Media Card', which plugs into the modem and, rather like a standard phonecard, automatically charges them while they are using X-Band. Several compatible titles are available, including *Virtua Fighter Remix*, *Sega Rally Championship* and *Bomberman*. *Virtual On* and *Daytona CCE* are also due for release.

The online initiative has so far been a modest success. 'We delivered 30,000 units by the end of October '96 and we plan to ship 50,000 by the end of March '97,' says Sasaki. 'We now have 1,000 shops selling our products and we may have 1,500 by January.' The Saturn modem has also recently been released in the States, showing that the system won't follow Satellaview into a Japanese dead end.

Barriers still remain, though. Consoles are, after all, still very much viewed as game machines. If Sega wants people to start buying Saturns instead of PCs to surf the Net, the company will have to change a lot of preconceptions. Nevertheless, Sasaki is ambitious. 'We shipped over 3.7 million Saturns by October '96 and we plan to ship five million by March. We would like 10% of Saturn owners to have a modem. But our objective is not limited to the Internet or network gaming. The content is not fixed. We want the Saturn to grow as a communications tool.' Although Sasaki's optimism is infectious, one thing is certain: the Saturn will have to develop as a games machine before it grows as anything else.









From top to bottom: the Sega modem (released in July '96); the floppy drive; the keyboard; and the modem fitted into the cartridge port of the Saturn



Sega's intention is that the modem will turn its 32bit console into a multipurpose communications tool. The firm hopes that 10% of all Saturn owners will buy one



Information

Prices (Japan)
- Saturn modem: ¥14,800
- Floppy drive: ¥9,800
- Keyboard: ¥7,800

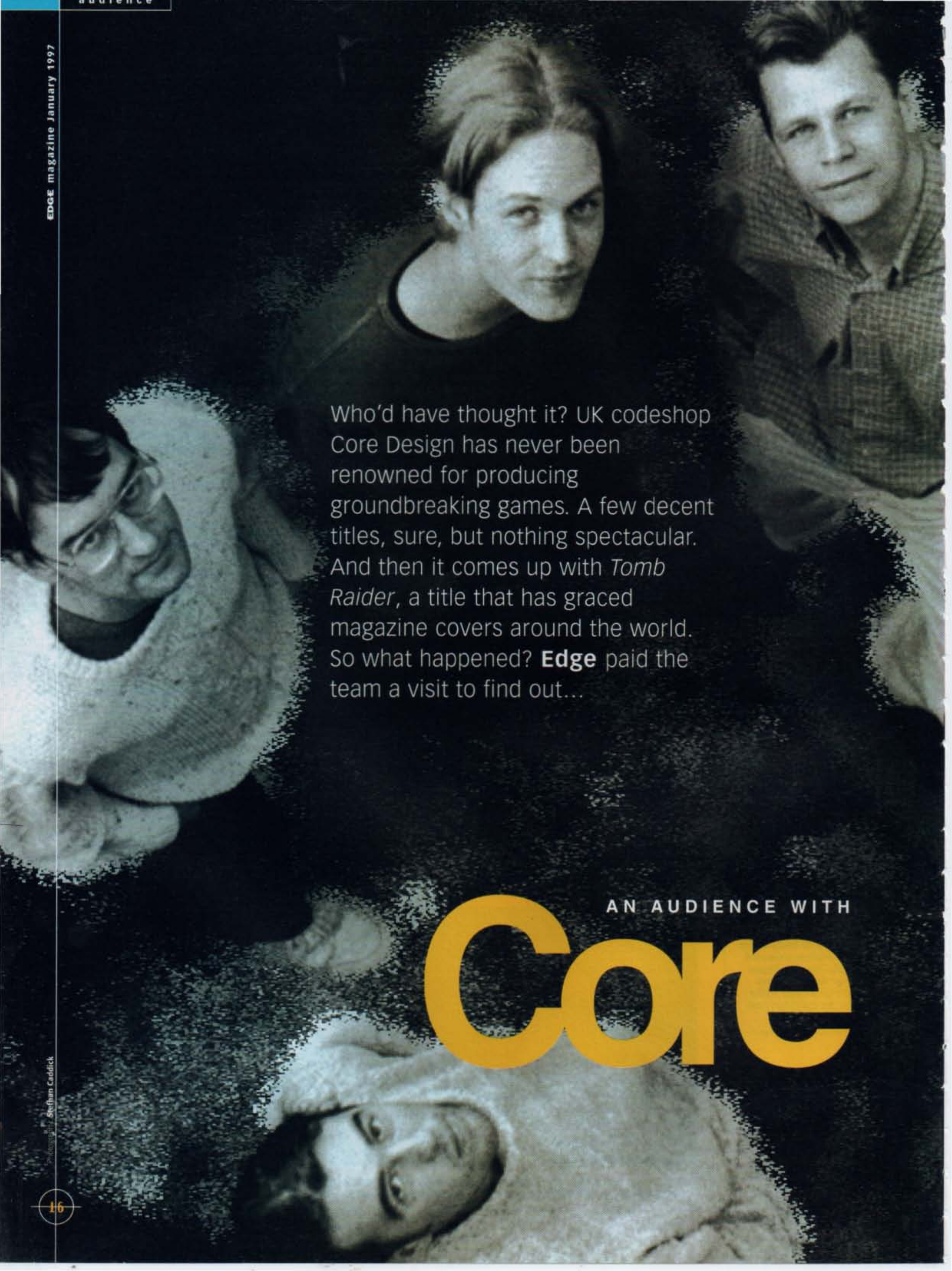
Modem bundle
In Japan, the modem comes bundled with:
- A CD-ROM containing Internet-browser software
- Pad Nifty – a CD-ROM which allows users to access Nifty-Serve
- A Media Card, which enables Sega to automatically charge users for time connected to the X-Band multiplayer network.
- *Virtua Fighter Remix: Network Edition*

NetLink
An American version of the Saturn modem, named NetLink, was released in Autumn '96 (see news, E34). Sega Of America hopes for sales of 100,000-plus by the end of the year.

In the US, the $199 modem comes with phone cord, Web-browser software and NetLink City Interface. The latter is a themed interactive home page for NetLink users.

The additional mouse ($25) and keyboard ($20) peripherals are also available in the States.

Further info
http://www.sega.com
http://wwwsega.co.jp

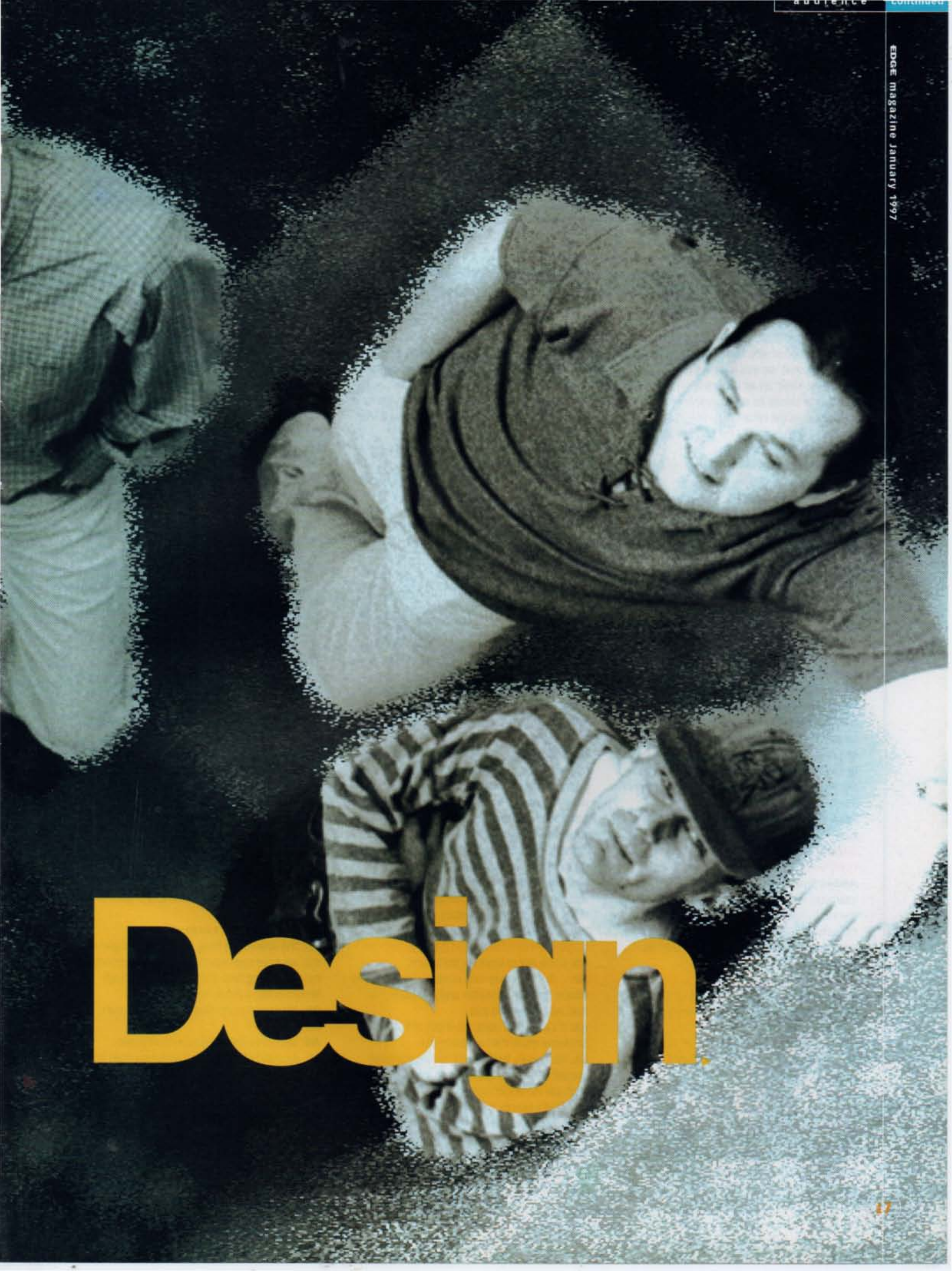


Who'd have thought it? UK codeshop Core Design has never been renowned for producing groundbreaking games. A few decent titles, sure, but nothing spectacular. And then it comes up with *Tomb Raider*, a title that has graced magazine covers around the world. So what happened? **Edge** paid the team a visit to find out...

AN AUDIENCE WITH

Core

Photography: Stefhan Caddick



Design.



here's an end-of-term atmosphere at Core Design. The impressive *Tomb Raider* has just been completed and critical and commercial success seems assured for the game. Let's not forget the lavish PR stunt, involving jetting off to Cairo with the UK's gaming press, which no doubt helped to give *Tomb Raider*, and Core, their unexpectedly high profile of late. And then there are the promising new projects already under way at the company's Derby HQ.

Prior to the round-table interview with some of Core's programmers and artists, operations director **Adrian Smith** showed **Edge** some of the work in progress at the company. '*Fighting*' is a tantalising cross between *Double Dragon* and *Virtua Fighter* and certainly one of the most innovative beat 'em ups in development anywhere. *Ninja*, an arcade adventure which seamlessly blends its action, adventuring and cut-scenes, is the other major title in progress at Core, and both use tools derived from those developed for *Tomb Raider*.

Edge spoke to **Mark Avory**, programmer on '*Fighting*'; **Stuart Atkinson**, artist, animator and designer on *Blam! Machine Head*, who is about to start a new project; **Paul Douglas**, programmer on *Tomb Raider* ['I don't know what I'm doing next']; **Joby Wood**, artist and designer on *Ninja*; **Dan Scott**, programmer on *Ninja*; and **Adrian Smith**, operations director.

Edge: *Tomb Raider* is a turnaround product for you. It has almost relaunched Core in the UK. From being a firm that's turned out standard generic products, you've now produced something that's right at the cutting edge. Does it seem like that to you?

Paul Douglas: I don't know. I don't think that it is really cutting edge. Certain parts of it are but when you look across the PC market, then some of it isn't. Look at *Quake*. That's cutting edge. But we're probably better on our animation – that's where we're at the cutting edge, with our 3D character animation.

Stuart Atkinson: It's by far the biggest thing we've had by a long shot, though.

Edge: So where did you get the inspiration from? What led to the design of *Tomb Raider*?

Adrian Smith: We had this vision of a character in a cinematic environment. That was the initial concept of *Tomb Raider*. We had immense problems initially with designing a system around the character that would let them move within a camera system.

Edge: So the idea came before the engine?

SA: We already had sketches and ideas about the game for about a year before we even finished *BC Racers*.

AS: That's fair for any product here. Generally, we find that new engines are derived for each individual games.

Edge: And the idea was originated here, which you do a lot of – the teams coming up with ideas rather than you all being told what to do.

SA: Oh yeah, it's always us.

Joby Wood: That's where Core really differs from a lot of other companies, I think.

Mark Avory: You have to do that. I mean, we put more effort into a game it's our own. If it's someone else's design then... so what?

Edge: Are there any major differences you've noticed developing *Tomb Raider* across the three formats – PlayStation, Saturn and PC?

PD: Not really, because so much of the code is generic C. Only about 4% is actually specific code for any machine. It's a big, big project and a pretty clean system – we just run a small number of primitives, so it's easy to convert.

Edge: Are *Fighting* and *Ninja* both being developed on the PlayStation and the Saturn at the same time?

AS: Both started out as Saturn-specific but have since diversified onto PlayStation for no other reason than when we started the projects, the lead programmers available were more knowledgeable on the Saturn.

JW: It's good, in a way, that it's started on the Saturn as you're set certain limitations by the hardware, whereas you could just start something on the PlayStation and really go for it, try and bring it onto the Saturn and have a load of trouble...

Dan Scott: But it's the same the other way around. You've got the Mode 7 floor on the Saturn which is going to be a nightmare to do on the PlayStation. To do it efficiently, anyway...

JW: Because with both games we're using a Mode 7 floor and the PlayStation just can't handle that at all. So that's all going to have to be done with polygons. But because of the actual speed that the PlayStation's got, that shouldn't be much of problem, as long as you don't see too much of the floor at any one time.

MA: Depends how well you use the Saturn code, though, because I've found out on my game that the Saturn's actually got more processor time than the PlayStation...

SA: It's that old Saturn/PlayStation argument, isn't it?

Edge: Does that really affect you at all, the difference between the two machines?

JW: Definitely. I want to keep the frame rate on *Ninja* at 30fps on both systems. I'd be really disappointed if either of the versions lost it, so we want to try to keep them both the same.

AS: It's like *Tomb Raider* didn't particularly struggle on the PlayStation. The Saturn had a harder time of it because there was no use of the hardware as such; it was just shipping an awful lot of polygons around. In development, you can sometimes find that the lesser platform slows down the whole project – you're working to its limitations all the time.

Edge: Is there a format you prefer to work on?

DS: Some like to work on the Saturn...

JW: ...But then they look at some of the lighting effects on the PlayStation and go, 'Oooh, my God, wish we could that.'

AS: It's a case of using the tricks of the hardware more than anything else.

SA: Well, yeah. We haven't done a machine-specific title. If we had, then we could actually push the individual machine.

JW: That's exactly what you need to do, because people want to feel that their machine is being pushed as far as it will go. And really, the first wave of games out on both the PlayStation and the Saturn didn't push the machines at all.



Arcade adventure *Ninja* uses routines originally developed for *Tomb Raider*

Edge: But then practically the only people who can afford to do machine-specific titles are hardware manufacturers themselves.

AS: Yes, but if you look at a game like *Tomb Raider*, we did wring as much out of each machine as possible. If you're doing a shoot 'em up with shitloads of effects and transparencies then, yeah, the Saturn'll do it, but it's just not as nice or as neat as on the PlayStation.

MA: If you were doing a 2D game, I'd say the Saturn is a lot better.

DS: We can put any game onto any machine. There's no real problem. If you've got a lot of lighting effects, you might lose that going to the Saturn, but the gameplay is not a problem.

PD: *Tomb Raider* is gameplay driven; technology comes second.

JW: But the visual stuff does sell games, doesn't it? People look at what they see onscreen and think, 'That looks so much prettier than that.'

PD: But that's been the problem with the first batch of PlayStation releases. They've all been visual but they've played like dogs. It's only the second wave that's been any good.

AS: When you look at the Rendition graphic-accelerated PC versions of games, they have everything to offer. Visually, they look bloody awesome and they've got the gameplay aspect of the consoles with no drop in speed or anything. So, if you want the best of both worlds, then that's something to look into.

DS: Or Nintendo 64.

AS: Or Nintendo 64, but then all your eggs are in one basket.

Edge: What do you think of the 64 so far?

PD: *Mario*'s phenomenal.

JW: It's exceptional, isn't it? Never seen anything like it, but as a game I prefer *WaveRace* to *Mario*. It's just a lot more fluid; you get into it a lot quicker.

SA: *Mario Kart*, that's what we want.

AS: The interesting thing is that the N64 games that we have seen have been in development for a long, long time and have gone through Nintendo half a dozen times, no doubt.

DS: *Mario* was in development for five years, wasn't it?

JW: Started on the SNES with the FX chip.

AS: It could be that just the Nintendo titles are, as always, all triple-'A'. And then you've got to ask yourself, would you buy a console for a title every two months? Possibly so.

JW: It's the same situation as the SNES. Nintendo definitely did the best games on that.

AS: It all depends on what the thirdparties produce, and that depends on what happens to the hardware, how much it costs and the



development path for people to work on it.

Edge: What about Sega? Core has traditionally been close to the company. How do you see its position in the next year or two?

JW: If you're not getting a game out on the Saturn by the Christmas after this one, forget it.

AS: Sega started second best to PlayStation. PlayStation did a better marketing job – got some of its bigger titles out initially – but there's some strong stuff on the Saturn.

Edge: So, it's not that Saturn is an inferior machine to the PlayStation? That's how it's often been perceived.

AS: I don't think that's the case. It [the Saturn] is a different machine; it's not as easy to program.

MA: PlayStation can draw polygons twice as quickly; Saturn's got more processing power.

PD: If you're driven purely by polygons, then we've found that on the PlayStation you're already limited by its draw speed. Our processing time is under the draw speed, so there's not much more we can do.

AS: I think the bottom line is that there's a lot more done for you on the PlayStation.

PD: It's quick to get things up and running.

Edge: It's also been said that Sony has been a lot more supportive than Sega. Have you found that to be the case?

AS: Well, we're probably biased in that we were so involved with the Mega CD, and with the Saturn in its early days, that we found it easier to get to grips with than a new thirdparty who'd just been given a Saturn development kit.

SA: The Saturn's driven by quads and everything on the planet uses triangles.

PD: 3D is triangles. You can't do 3D using four-sided primitives; it's a basic fact. You try building characters out of four-sided primitives and you just limit yourself so much.

SA: There are ways of getting around it on the Saturn but it's memory first.

PD: It seems like it's a 2D machine really beefed up for 3D performance. It draws everything as 2D primitives. They seem to have gone, 'Ah, look. The way forward is 3D. Let's just bung another SH-2 in and hope we can compete.'

Edge: What do you know about Saturn 2 and PlayStation 2?

SA: Absolutely nothing. It seems as soon as we get used to a machine and we start to get to the point where we can push and know what we're doing with it, a new one always comes along.

PD: Yeah, it's so technology-driven. Really, we want a stable base that we know, that we can develop good games with good gameplay on.

SA: You need an upgradeable console where you can upgrade video cards in the console.

PD: Then you need expansion connectors, which cost money...

MA: But if you're trying to make an upgradeable console, it'd be like the PC, wouldn't it?

AS: I think if they keep driving the price of the consoles down, the reality is that they'll almost become a disposable item.

Edge: Isn't that the way Nintendo has always operated in the past?

PD: But Nintendo is still aiming more for the toy market, whereas PlayStation has been aimed at this more hip twentysomething male.

Edge: Has it worked? Are hip twentysomething males buying PlayStations?

SA: People seem to be impressed by them but I don't know how many people actually buy them.

JW: Well, I won't be buying one. I'll buy a Nintendo 64. Definitely. Or the other console I'd buy is a Neo-Geo CD. It's all about games at the end of the day.

Edge: But the sort of traditional sprite-based gameplay that the Neo-Geo does so well just doesn't sell in Europe or the USA any more.

AS: The Japanese market is just so different. They know their own market, but a strict Japanese game doesn't always travel that well over here...

JW: Yeah, it's like the PC Engine was an absolutely amazing machine that never got the push it deserved over here. There are some brilliant games on the PC Engine.

Edge: Is that where you draw your inspiration from? Old games?

JW: Definitely.

PD: No, no, it's not that. You've just got to have this interest, a passion for what you're doing. Otherwise you might as well go off and write accountancy software and be on a load more money than you are here, because we could all do that.

AS: You've just got to look at how many different styles of games there are. Probably not that many and it's a different skew, a different way of looking at it.

PD: So, everybody's expecting these 32bit games to be really mind-boggling but they're really just old games repackaged in 3D.

SA: You still flick switches, still dodge spikes...

PD: If there was a magical formula you could put your finger on, we'd all be doing it and there'd be no more shit games. I don't think any game is shit at the start of its design. Every game has the potential to be good but, somewhere along the line, it loses the plot a bit and the people get disinterested.

JW: You can't put playability in a game design document. There might be a few key points but playability is just about playing the game. 'Does it feel right?' And if it doesn't feel right, you need to tweak it.

Edge: So how do you feel about your two new projects, *Ninja* and *Fighting*?

JW: With *Ninja*, we've got quite a good system where we can download straight to the Saturn. We're placing our baddies within the editor, placing all the bonuses in the editor, and where key points happen in the game, there's a trigger system. It's all really easy to edit so we're just building up the levels bit by bit, playing them, developing them as we go.

PD: The key is to keep tweaking all the way along. We spent two years on *Tomb Raider* and I think I spent all that time tweaking the control system trying to make it better and better. I think a lot of people miss that out and go, 'Two weeks for the control system, three months for the graphics and some nice effects.'

Edge: So does it help with the system of tools that you've got in place here, that you can alter the whole game as you're going along?

AS: Going forward, that's the biggest thing we've found here – creating the tools that allow you to develop a working environment so that you don't have to bother the programmer every two minutes: 'Would you try this?'; 'Can you see what this looks like?'

PD: I'd say about 40% of the programming time on *Tomb Raider* was spent developing tools, which was well worth it because then the artists ▶



From left to right: Stuart Atkinson, Adrian Smith, Mark Avory, Paul Douglas, Dan Scott, Joby Wood

◀ can go off and put all their expression into what they're doing without bothering us all the time.

Edge: It certainly seems that, from the approach you've got here, the artists have a genuine chance to contribute rather than just be graphics creators.

AS: That's the whole team thing. The artists create the environments, create the characters. The programmers do the hard work, the stuff that is hard for probably the average person to understand. But it's a two-way street. It comes back to the creativity. The team knowing the things they'd like to put in and seeing if it is achievable. One example, in *Tomb Raider*, was the swimming. We never envisioned having Lara swimming but we made the decision to put that in, which pushed the development time by a few months but added a whole lot more to the game. It's fairly typical of the ongoing development of a project from beginning to end.

Edge: But can small, integrated teams compete with large companies with huge budgets?

PD: The problem is that games seem to be getting less ambitious and afraid to take risks. You've got such big companies controlling things. It's run by bean-counters, in the main.

AS: I think the biggest difference is, the middle ground for the games industry has disappeared. It either sells bazillions or it sells like four or five copies. You can roughly bank a safe bet but that bet is becoming harder because the consumer is getting more selective. Y'know, we sit here and we look at our games but there's also the whole world to consider... knowing what's going to be coming out in 12 months' time. I suspect that we'll see a glut of *Mario* lookalikes.

PD: I don't think that there's any people that can get up to the level of *Mario*.

Edge: They can certainly create a similar 3D world but fill it with nothing original whatsoever.

PD: Yeah, the move from 2D to 3D has made the job so much more difficult – you have to put so much more effort in to fill that world with interesting things. Because you can move in that extra dimension, you've just got to try really hard to give the player extra things to do and keep their interest up.

Edge: So, is that it? Is 2D gone?

JW: No, I don't think that at all.

AS: There are some really clever 2D games. There's a batch coming out on the Saturn. I mean, *Pandemonium*, it's a left-right game, what else can you say?

DS: And then there's all the Namco collections and there's *Bubble Bobble* and *Rainbow Islands* on the PlayStation.

JW: Everyone's looking back at the old games and going, 'These games had bucketfuls of playability!', which they did.

PD: I think that you can do most games that were in 2D in 3D with a bit of creative thought and bring some new ideas to it and make it better. You can't just slap it in 3D, which some people have, and expect it to be as good and as playable as a 2D game.

Edge: Is that what you're doing with *Fighting*?

AS: Yeah, it's just a combination of classic 2D games. It's got elements of *Streets Of Rage* – a class 2D game – in there. It's linear but it's 3D. You can go around, kick the shit out of anyone, out of the environment. It's the same thing but taken into that third dimension.

JW: You can say that with *Ninja*, as well. *Ghosts & Goblins*, *Rygar*, *Shinobi* – it's heavily influenced by all them. Old-school playability in a new 3D environment.

AS: I don't suppose we're doing anything different from anyone else. We're looking at some of the old classics and bringing them into the twentieth century, looking at a clever skew of that idea. Look back at Core's history. Look at the first game we ever produced, *Corporation*, and look at *Doom*.

Edge: You weren't ever tempted in *Tomb Raider* to get rid of the character and make it firstperson like *Doom* or *Quake*?

PD: No, it was character-driven. The artist, Toby, had the idea that he wanted it to be more filmic. I think it is different from the firstperson because you're not that character, you're controlling them. It's a bit like the classic 2D platformers, like *Sonic* or *Mario*, where you're looking after this character; it's not you in there.

DS: And you wouldn't have been able to do stuff like her jumping and hanging from a ledge. You can see everything she's doing.

Edge: That sort of attention to detail is very reminiscent of recent French games like *Fade To Black* and *Alone In The Dark*. Now, you've got continentals working here, what do you think that European sensibility brings to game design?

DS: The French have always had weird ideas.

AS: They have a graphical style, if you look at the artists. I'm not so sure the programmers have much... much at all, if anything.

DS: The French were the first to do that sort of cinematic style game.

PD: They had consistency throughout the whole game; it never was broken up.

Edge: No full-motion video. [Groans all round.]

DS: Didn't *Another World* have FMV on the Amiga? It was done with polygons but it looked really impressive. The car and opening the can of Coke. At the time, it was groundbreaking.

JW: You see, I prefer that sort of stuff to actual FMV because you feel it's actually happening within the game engine. You never go, 'Ooh, that's real. Ah, now I'm back to the game; why can't it be like that?'

Edge: It's the difference between reality and art representing reality. It's like when photography appeared, art reacted by becoming abstract. And now that photorealism is possible in videogames, they're becoming more abstract.

PD: Yeah, I think that's a good thing because it allows you to come up with a load more ideas.

DS: In the end, I think gamesplayers want to be immersed in an imaginary fantasy world.

Edge: Okay, lastly, who went to Cairo?

AS: I did.

JW: None of us did. [A chorus of groans.] I think the management went.

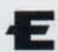
PD: We were hard at work finishing the game.

AS: You'd have had a horrible time. You'd have got bitten by mosquitoes. Your lily-white flesh under that beating sun... I just had your main concerns at heart.

JW: Quite a few journalists went. [Another chorus of groans.]

AS: Yeah, and they all drank the water, they were all violently sick and they all had too much beer at the end of the day.

JW: Well, at least we've got some good reviews...





Jack Sorensen

Photography: **Jude**

president, LucasArts

Since forming in the '80s as the logical prodigy of 'Star Wars'-creator George Lucas' pioneering videogame publisher Lucasfilm Games Ltd, LucasArts has become one of the most respected players in the videogame industry, providing the PC with many of its must-have titles including *The Secret of Monkey Island*, *Sam 'n' Max Hit the Road* and *Dark Forces*.

Now the company is branching out into PlayStation and Nintendo 64 territory, where it hopes for similarly well-received success.

Company president Jack Sorensen, a former futures trader on Wall Street, has been at the helm for six years, and has seen the company grow from 50 to 275 employees while maintaining a standard that its many competitors would kill to get anywhere near.

Edge met with him at LucasArts' HQ in San Rafael, California.

Edge: Walking around here, it seems that LucasArts has a unique relaxed working environment. Is it different to other companies in this respect?

Jack Sorenson: I do think our culture here is a lot different to other games companies. If you went to EA, you'd be shocked. It just feels so corporate – you're not even allowed to decorate your cube there, for God's sake. It's one of the best recruiting tools we have, our culture here, that we're not EA.

Edge: Your background in the industry is somewhat unconventional, isn't it?

JS: I started out in 1990. I was the first 'suit', and there were only 50 people here. I used to work on Wall Street, of all places, and before that I was a musician, which is a pretty weird background. To me, the industry is in this 'middle' period. There were the original founders, all the Atari people, and then there was the next generation, from 1987 to 1990, where it changed from that hacker single-system stuff to, in many ways, the people who are running the industry now. I'm part of that next generation. A lot of those early guys either left games or stumbled into other stuff. When I came on it was to try and start 'professionalising' – or whatever you want to call it – the company, because there was no business person here.

Edge: The industry seems to be having some serious problems, with big players like Acclaim losing money hand over fist. Why do you think that is?

JS: I think the industry is a lot smaller than people think it is. It got big, from a perception standpoint, in the last three years, and it never was that big. It's still a pretty small industry. It's just that there's been a lot of media attention and, worst of all, a lot of financial interest, which is causing a lot of the problems in the industry right now. It's suffering from the boom days of two years ago, when it seemed that no matter what you threw out there, you could make money. There are twice as many games being released this year as last year. It's insane, and most of it's just crap that should never have been started in the first place.

Edge: You make it sound pretty grim. Is it really that bad?

JS: Yes. It's a bad time in the industry, and anyone who tells you different is lying. It will correct itself, but it'll take a year. A bunch of companies that didn't do too well last Christmas will talk their investors into giving them more money this Christmas, and it's just money down the tubes. At some point the reckoning will come, and it'll be some time next year. It's only the beginning.

Edge: What's the remedy?

JS: One of the biggest issues is not around this 'You've got to be big enough to survive' stuff – I think you've really got to have quality games and global acceptance or you can't afford to make the game in the first place. I don't know how you'd do something for a single market, such as Italy. Maybe you could do something really niche, but to be a world player, God, it's frightening for these small companies.

Edge: You've done *Shadows of the Empire* on the N64 and the *Dark Forces* game on the PlayStation. Which videogame system does LucasArts feel is best for it?

JS: It's never good for a company to go on record picking favourites. These things have so many different layers to them. I would say that we're not doing a lot of Saturn stuff, but there's something to be said for making games for Japan only for the Saturn. EA made a lot of money on 3DO in the end, even though it was a niche market. They charged a lot for the system, and it wasn't a bad move for them at all.

I have a deal with Jim Morris, who heads up ILM, that if they have some people between projects they can help us out. Films are often delayed – they have 60 people waiting around

Edge: Factor 5 is now closely associated with LucasArts. How did that happen?

JS: They pursued us to a large degree, because they'd been hooked up with Rainbow Arts and SoftGold and they were trying to stretch out to be a more global player, and they just couldn't do that from Germany because there's no infrastructure, no base, and they were just out of the loop on everything. So we sponsored them to come over [to the US]. It's the kind of relationship we like to have – you know, really good programmers – but because they've been locked in a small market, they don't really have the knowledge they need to be a global player. We've been doing *Ballblazer* with them, which is obviously important to us because of its history, and we take care of all the cosmetic stuff and they take care of the code, and it works really well.

Edge: How heavily does LucasArts rely on outside talent?

JS: We only have four companies that we work with externally, and that's pretty much as many as we want. It's important from our side to make sure that it's a LucasArts product – basically, the organisation critiques it and improves it, and one of the big faults of small, thirdparty developers is that if they try and offer everything, they don't have the depth. You know, we didn't have the depth in 1988 to do everything really well. They might have good testers, or great designers – they may be totally competitive in one area like 3D, but not in another. It's a hell of a challenge to have just ten guys getting together and doing it all really well. I've got 275 people here that I can choose from, and many talents to draw upon, so if something's not working out in one department, you can have another group have a go and try to get it pinned down. It's about sharing talents, so it has to be a co-operative relationship. You have to make sure you're involved and working together, rather than just farming stuff out.

Edge: There can't be many things that LucasArts can't take care of in that respect. Do you have access to other Lucas company talent, such as ILM?

JS: We do. ILM are doing some stuff for us on *Jedi Knight* and *Ballblazer*. I have a deal with **Jim Morris**, who heads up ILM, that if they have some people between projects they can help us out. Films are often delayed, and they have 60 people waiting around to get started on it, and there's no time for them to start anything huge, so it's ideal. It's on a spot basis, though. We couldn't afford them otherwise. Having said that, it's more of a manpower issue. There's nothing they can do that we couldn't ever do, it's just time-consuming. We've even had to clean up one or two of their animations...

Edge: You said that there were only 50 people working here when you joined in 1990, yet now there are 275. Do you ever miss the LucasArts of old?

JS: Well, we're more professional now. Sure, in a way, I'd prefer a smaller company, if we could get away with it, but you just can't. It would be nicer because everyone would know each other, and you could meet up in the bar after work, that kind of thing. Now, every time you have a party it's just huge, like a circus. The biggest upside for me, though, is that there are so many more cool things going on. It used to be that there were only two or three projects – it would almost be too intense, with too much at stake. Also, you're dealing with too much focus, even within the development teams, on just one style. But with a big organisation, there's a lot more mixing of styles and opinions going on. Better yet, and something that I like, is when someone says, 'Jesus, that looks like crap,' and that makes people look very critically at what they do. We've got a lot more going on, and there's more internal competition, which brings the level up of everything. So yes, I miss it, but I wouldn't want to go back. E

Prescreens

This month Edge expands its previews coverage by introducing a section dedicated to news of titles breaking on the videogame scene.

The first wave of alphas includes a slew of hot N64 titles from Shoshinkai.

Raven, the company behind *Doom* clones *Heretic* and *Hexen*, is gearing up to release *Hexen 2* for the PC, which will be the first third party game to use the *Quake* technology. Raven has always enjoyed a close relationship with id Software, but is often regarded by many gamers as the slightly less talented brother of the Texan firm. *Hexen 2* could change all that by merging the impressive *Quake* engine with Raven's integrated level design and detailed, colourful architecture.

Myst, famous for being one of the best-selling CD-ROM games of all time (with sales in excess of 1.5m) is about to return as *Myst 2: Riven*. Details are sketchy at the moment – the game's creators, Robin and Rand Miller, are extremely guarded. The plot is a secret, as is the technology employed – though the engine will be built in-house by publisher Broderbund – so it's not yet clear



It's taken a while, but *Myst 2* is finally progressing. As with the original, high-quality visuals are everywhere





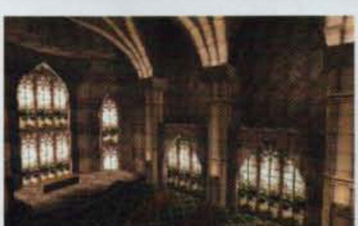


Taito's PlayStation conversion of *Ray Storm* has recently been made available in demo form in Japan. It looks promising









Raven's *Hexen 2* uses id Software's versatile *Quake* 3D engine. It looks extremely impressive at this stage







Activision is bringing *Pitfall* up to date with *Pitfall 3D*. Graphically, it looks amazing, but it has its work cut out in attempting to improve on Core's widely lauded *Tomb Raider*

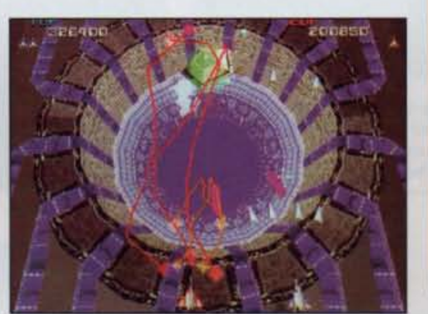




Namco's PlayStation *Air Combat 2* looks like being a more accomplished game than its predecessor, with increased ground detail and improved graphical effects in general



Sega's Saturn conversion of *Last Bronx* is currently at an early stage, with only several characters in place


Fans of vertically scrolling shoot 'em ups will be looking forward to Namco's *Xevious Perfect Collection*, which gathers four versions of the classic on one PlayStation package

whether it will turn out to be a tedious click-and-wait affair or a full 3D environment (although, sadly, the former looks to be the most likely).

Activision continues its run of *Pitfall* updates with *Pitfall 3D* for the PlayStation, which is looking more and more like a cross between *Crash Bandicoot* and *Tomb Raider*. Though still in the very early stages of development, it should provide the PlayStation with a 3D platformer with a respectable lineage.

Namco is dusting off more of its past hits for lucrative re-release on the PlayStation. *Xevious Perfect Collection* is a compilation of four versions of the classic blaster, bringing together the 1983 arcade original, the 1984 Famicom title, *Xevious 3D/G* (the System 11 coin-op released earlier this year in Japan) and *Xevious Super* (aka *Xevious Gamp*), the version released on *Namco Museum Volume 1*.

Namco is also working on *Air Combat 2*, a follow-up to the company's early PlayStation arcade flight combat game which will hopefully be an significant improvement upon its predecessor.

Shiny Entertainment's new platformer, *The Wild 9s*, looks every bit as obsessed with its characters and their animation as the company's breakthrough title *Earthworm Jim* was. *The Wild 9s'* creative director Kevin Munroe previously worked as an animator on 'The Simpsons' – a head-turning factor in itself – and the game will boast in ▶




Shiny, which brought the world *Earthworm Jim*, is hoping that *The Wild 9s* will bridge the 2D/3D gap. The cartoon feel is courtesy of designer Kevin Munroe, who worked on 'The Simpsons'

Namco Museum Volume 5

Namco's latest trawl through its back catalogue reveals the usual mix of major and minor hits. Best known of Volume 5 is *Pacmania*, a not entirely successful attempt to put *Pac-Man* in isometric 3D. The left-right scrolling race game *Metro Cross* and shoot 'em up *Dragon Spirit* should also be familiar. The more obscure names are *BaRaDuke*, a jet-pack shoot 'em up reminiscent of Capcom's *Section Z*, and *Legend of Warukiru*, an early action RPG featuring characters that later appeared in Namco's SNES title, *Xandra's Big Adventure*. A Spring '97 release is expected.








Mother 3 **(to be renamed *Earthbound 2* in the west) looks like *Zelda 64*, with equally impressive visuals**









Gunstar Heroes' **creator Treasure is developing on the N64 with *Go! Go! Trouble Makers* (top left and top right). *Kirby's Air Ride* (above left) joined *GoldenEye 007* on video at Shoshinkai**







The first fully fledged RPG title for the N64, Imagineer's *Erutel*, was unveiled at Shoshinkai. Imagine a traditional Japanese RPG (wander through forests and plains before visiting villages packed with inns and weapon shops) in a 3D environment akin to that of *Super Mario 64* and you'll begin to get the picture

◀ the region of 60,000 frames of animation compared to *Earthworm Jim*'s 3,000. Shiny will, no doubt, be looking to exploit the cross-media potential of the game's star, 21st century warrior, Wex, in the same way it did so successfully with *Earthworm Jim*.

In Sega Saturn land, AM3 is in the process of converting its beat 'em up coin-op *Last Bronx* to the Saturn. The Model 2 original departed from the traditions of AM2 fighting games by arming each of its eight characters with their own weapons. These range from traditional Japanese sais, katanas and nunchukas to 'street' fare like nightsticks and hammers. Though early in development, it will no doubt prove to be another polished Saturn conversion.

Nintendo's 64bit gamebox was recently given a big shot in the arm at the Shoshinkai show in Tokyo, where a host of games were revealed for the first time, including two 2D platformers, *Yoshi's Island 64* from Nintendo and *Go! Go! Trouble Makers* from Enix, and two RPGs, Nintendo's *Mother 3* and Imagineer's *Erutel*. More evidence of *Zelda 64* was also shown, and looked spectacular (perhaps unsurprising, considering Shigeru Miyamoto's heavy commitment to the project). Roll on 64DD... E



These shots of new N64 title *Ed* appeared just before the issue went to press. Though little is presently known about the game, from *Street Racer* creator UbiSoft, it certainly looks swish



One of the most promising-looking N64 games to appear at Shoshinkai – even though it only appeared in video format – was *Yoshi's Island 64*. The game's 2D nature is proof indeed that Nintendo's chief consideration is gameplay – although, admittedly, this is *beautiful* 2D













The game that many made the trek to Shoshinkai for was undoubtedly *Zelda 64*. Although it was another title shown in looping video form, the brief taster was enough to whet most attendees' appetites, with luscious environments and sinister-looking adversaries





The familar element's of *Zelda* games have naturally been carried over to the N64 version, including the Tri-force (above)



Star Fox 64

Nintendo's first experiment in 3D was the Super FX-powered SNES hit *Star Fox*. The sequel is the most graphically impressive N64 title to date. Will this be the game to sate N64 owners' hunger following the dearth of first-rate software for the machine?









The Nintendo 64 hardware handles translucent textures effortlessly. Though this scene (above) looks fairly basic, it's fast and fluidly done

The cut-scenes are some of the game's high points, using clever pacing and intelligent 'camera work'. The Star Fox team preparing for action (top) is a particularly memorable sequence



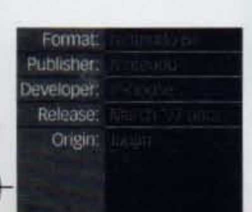
Developed in conjunction with UK-based softco Argonaut, Nintendo's original *Star Fox* title, though some way short of the Japanese company's most impressive in-house titles in quality terms, proved an entertaining, if nonetheless short-lived 3D shoot 'em up.

The game laid the foundations for this 64bit version, whose development has been undertaken solely by NCL's in-house team under the ever-scrutinous eye of Shigeru Miyamoto.

Star Fox 64's storyline concerns the emperor Andross, the villain from the first game, who has launched another attack on Cornelius, the planet inhabited by Fox McCloud, the player's character who, together with three fellow space warriors, comprises the Star Fox team.

While the scenario may be standard stuff, the way it's presented is anything but, with realtime cut-scenes setting the atmosphere for what is to follow with remarkable fluidity and cinematic quality. One early scene, for example, sees the Star Fox crew dashing down a corridor as they head for their spacecraft, while a later sequence is almost 'Star Wars'-like in its construction as the game camera slowly revolves around a hulking space station. And, because it's all being generated directly from silicon, its correlation with the game's front-end and the in-game action is seamless.

The graphics that make up the game proper are equally as gob-smacking, with extravagant textures, remarkable reflection routines and the sheer scale of some of the game's components all vying



Format:	[illegible]
Publisher:	Nintendo
Developer:	[illegible]
Release:	[illegible]
Origin:	Japan







Encounters with the boss characters in *Star Fox 64* are, naturally, the most visually strong. All are massive and packed to the gunwhales with all manner of weaponry. This giant walking robot (top right) is reminiscent of one from the SNES game, but the N64's architecture makes all the difference

for the player's attention.

In gameplay terms, *Star Fox 64* follows its predecessor's template closely, with similar play mechanics for the most part, shifting furthest away during the sections which hand control over to a land-based tank-type vehicle. Rather than being merely a 64bit *Battle Zone*, though, this section of gameplay expands upon the left-right-back-forward-fire formula allowing you to 'side-step' enemy attacks by flipping your tank over – in a similar sort of fashion that the craft in the space-based sections can by rolled.

Star Fox 64 is the first title to use Nintendo's innovative Jolting Pack peripheral, bringing the battery-powered device to life when the player's craft takes a hit from enemy fire, for example. The initial feeling as the N64 joypad vibrates is a strange one, but nevertheless effective.

Cut-scenes set the atmosphere for what is to follow with remarkable fluidity and cinematic quality

In addition to the main, mission-based gameplay, Nintendo has included a simultaneous multiplayer battle mode where the screen splits and up to four players battle to the death. Even in this mode the level of graphical detail is surprisingly high, reinforcing NCL's reputation as current masters of its 64bit technology (the split-screen modes in thirdparty title *Blade and Barrel* seem shoddy by comparison).

While still some way from completion, *Star Fox 64* already looks like being one of 1997's biggest games.



Though predominantly space-based, *Star Fox 64* is set to have a number of sections on land. Enormous bosses still prevail, though…





Shigeru Miyamoto

He's the greatest videogame designer in the world. Now, after the magic of *Super Mario 64*, he's taking on *Zelda* and 'around ten' new 64bit games.

So what are the Nintendo game chief's plans? Is he still inspired? In the following exclusive interview, Edge finds out

Without *Super Mario 64*, *PilotWings 64* and *Wave Race 64*, Nintendo would be lost. The three games are leaps and bounds ahead of everything else available for the Nintendo 64. What else do they have in common? They are all titles whose development was presided over by **Shigeru Miyamoto**, Nintendo's chief designer and game guru who has been with the company since the early '80s.

Since introducing Mario with the creation of the coin-op *Donkey Kong*, Mr Miyamoto has figured at the heart of Nintendo's inhouse game development. His credits read like a console game 'Greatest Hits' listing, including such gems as the *Super Mario Bros.* and *Zelda* series, *Star Fox*, *PilotWings*, *Yoshi's Island* and *Super Mario Kart*. And now, as thirdparty Nintendo 64 game development appears to stumble and stall, Nintendo needs him more than ever.

So how is he feeling about the Nintendo 64's future? What does he think of the system's games so far, and what gaming greatness is there to look forward to? **Edge** met Mr Miyamoto at Nintendo's November Shoshinkai show for the following interview...

Edge: What was the purpose of this year's Shoshinkai show?

Shigeru Miyamoto: We wanted to emphasise the hardware power of the base Nintendo 64 – and that's why I'm not allowed to answer many questions concerning *Zelda* or 64DD. We wanted to show that the cartridge market is strong and that Nintendo is committed to building a strong cartridge market.

Edge: How well do you think that this has been achieved so far?

SM: I think we are still on the way to achieving this in Japan. I think we'll need a year – maybe a year and a half – after the launch of the hardware in Japan to achieve some of our launch goals. Certainly, by the end of next year we hope to have a wide variety of cartridge software available for Nintendo 64.

Edge: Do you think the games released so far have proved that cartridges are capable of delivering the gaming experiences people want?

SM: I think that we have completed enough software to prove that cartridges are a viable and important medium. But unfortunately, most Japanese users don't see it that way – they see CD-ROMs as a current trend and they feel that cartridges are in some way obsolete. But when it comes to software content, we have proved there's still life left in cartridges – we just haven't managed to persuade a lot of the Japanese consumers yet!

Edge: Most cartridges for the Nintendo 64 have been 64Mbit, but already a 96Mbit cart has been introduced for *Super Mario Kart 64*. How big are Nintendo 64 cartridges going to get?

SM: That's a good point. It's worth remembering that when Nintendo introduced the disk-drive system for the NES in the 1980s, it was unthinkable that ROM cartridges could become so cheap. Even now, they are becoming cheaper than we were expecting them to be until recently. I believe that within the next year we will introduce a game on a 128Mbit cartridge, but I have no idea what will be possible at an affordable price in two years' time.

Edge: One of the great things about the Nintendo 64's lack of a CD-ROM drive is that musicians can't be lazy and simply spool a prerecorded soundtrack off CD. Instead, they have to store sounds and scores electronically – and this means that the music can respond immediately to what is happening in the game; it's almost 'interactive' music. A great example is the sunken-ship level of *SM64*, in which the music immediately ups in pace when Mario reaches the far bank of the lake. How important is this 'interactive music' to games?

SM: Many people want to have high-quality music, say with a full orchestra sound or something. But what I am saying to our sound staff is they shouldn't be too concerned about the quantity of the music data. Rather than concentrating on increasing the quantity of music in a game, we should try to make the most of its quality. Without CD, musicians may be disappointed with the quantity and range of data that they can use, but over time I think they will learn to appreciate that less can be more. They should brush up their skills in producing interactive music, and eventually technology will allow this type of sound composition to match today's prerecorded music.

Edge: What lessons can be learned from *Super Mario 64* about producing games in 3D?

SM: I think that basically the point that we were focusing on with *Super*

Mario 64 – and this may or may not be a lesson to others – is that in the past, 3D games have been developed selfishly by the creators. We approached *Super Mario 64* from the other direction and tried to cater to the selfishness of the end users and their desire for control, a good game camera, and ease of play. This was not a lesson for us, because we've known that this was the best way to do it since we first started experimenting with 3D using the FX chip for the Super NES. So the *Super Mario 64* project was more of a reminder to us, and it reconfirmed that, as with all games, you have to cater to the user's desires.

Also, we learned a lot while making *Super Mario 64* about the potential of the Nintendo 64 hardware itself. And while making the game, I discovered many points about the game's 3D engine that could be modified or improved. We didn't have time to implement these changes during *Super Mario 64*, but now, as we start work on the next games – *Zelda*, for example – we can complete a tune-up of the *Super Mario 64* system, and games like *F-Zero* can be a completely new version.

Edge: You've said in the past that *Super Mario 64* used 60% of the Nintendo 64's potential. If this is the case, how much does a new game like *Star Fox 64* use?

SM: Between 70% and 80%.

Edge: So when will we see a game that actually employs 100% of Nintendo 64's power?

SM: Probably at the same time that Nintendo's next hardware system turns up. [Smiles.]

Edge: What feedback have you had from gamers about *Super Mario 64*, and were you surprised by anything that they had to say?

SM: I have received so many fan letters – including many letters from first-graders at elementary school – that claim that they have already collected 120 stars. I have noticed that a lot of kindergarten kids are better than I am at playing *SM64* – so it seems that it has appealed to the younger audience.

Most people who see what I'm working on say 'This isn't a game!' So I am kind of in trouble right now

Edge: *Super Mario 64* features many game elements – such as the large emphasis on exploration – that make it seem more like a *Zelda* game than a traditional *Mario* game. Does this mean that we can expect *Zelda 64* to resemble *Mario*, or will it take a new direction?

SM: In the 1980s, when we started on the original *Zelda* and *Super Mario Bros.*, we had the same kind of concepts for each game, so it's no wonder that the two series are converging and that *Super Mario 64* is approaching the *Zelda* concept. But in fact, we have a lot further still to go with the concept, so you will still see a lot of different things with *Zelda*.

Even though the underlying structures of two games are converging, emotionally I think that people will have different experiences with the two games. With *Zelda* you are supposed to be in a certain age, in a certain year in the past, and you are put into certain situations – and you will feel, or even 'smell the air' and feel how 'warm' or 'cold' it is in the *Zelda* world. It will feel like a very different game.

Edge: Are there any secrets left in *Super Mario 64* that no one has discovered yet?

SM: [Smiles.] I don't think so.

Edge: Really?

SM: Maybe, the penguin can be fatter... [Smiles.]

Edge: What feedback have you had from gamers about Nintendo 64's analogue joypad?

SM: Generally, it has been accepted with open arms. Sure, some people don't like it. But I think most people agree that once you get used to it, it's impossible to go back to playing this type of game without a 3D joystick.

Edge: Do you think most gamers have been able to change their playing habits? With a game like *Wave Race*, have you found that most gamers use the analogue pad properly – pressing it halfway for a gentle turn, for example – or are most experienced gamers still making the 'tap, tap, tap' turns that were required with a traditional eight-way joypad?

SM: I think it's easy to get accustomed to the analogue pad, and most people manage to master it after about two hours' playing time. But, of course, it's another question altogether as to whether or not gamers will



accept it in the long term. When we first introduced the 8bit Famicom into Japan in the 1980s, everybody had been accustomed to using a joystick, and many people complained about the new joypad. They did get used to it, though.

Edge: Are you surprised that, following the launch of Nintendo 64, both Sega and Sony launched their own analogue pads?

SM: No, I was not surprised because I thought that if we were going to introduce something, many other people would imitate us.

Edge: The next big innovation from Nintendo will be the 64DD disk-drive add-on. You say that it will help because it will make games cheaper, but what plans do you have to exploit the system's writeable drive?

SM: I think that the power or ability to create a new and unique game will be expanded twofold beyond what is possible with cartridges. We have a lot of original and unique game ideas but we have not been able realise them because there is no writeable medium. We are trying to go where no game designer has gone before...

Edge: What are you working on at the moment?

SM: Now I'm working for the PR department! [Laughs.] There are mainly three parts to my job right now. First, there is my normal job which is as a game producer working closely with the game directors of four or five different games. But this is always the case with me, I always seem to be working on four of five games at any one time. Second, I work with producers working for other companies – so I am supervising the development of around ten games at thirdparties. Third, I am involved with disc-based games – a little less than ten right now. These projects include the system construction for *Mario Paint*, editing *Sim City* – and other similar titles – and, as I said earlier, I am working on the basic structure of self-growing games. This new project will be due for release sometime in 1998, and it will be very unique, original and different. But because of that uniqueness, most people who see it are criticising it, saying, 'This is not a game!' So I am kind of in trouble right now, whether what I am doing is right or not.

Edge: Can you tell us any more about this project?

SM: I think it's important for us to have many ways to create games. We have the potential to offer a quantitative change with Nintendo 64 hardware – not only by having more gorgeous titles with the same themes, but with many other applications. After all, what we are selling is a computer-like toy, and, as with all toys, if you are to fully utilise its functions, it shouldn't be used for just one thing. I believe that the Nintendo 64 hardware was designed to offer a variety of ways for consumers to enjoy themselves.

Edge: With the Nintendo 64, a home videogame system is perhaps for the first time powerful enough to support some kind of virtual reality. Is this a prospect that excites you, and would you support plans to introduce some kind of 'VR' headset for Nintendo 64?

SM: If it's for some very short experience – say, less than two minutes or so – then I think such headsets are okay, but personally I am concerned about the possible hazards to the human body if people are expected to ▶

wear the headset for long periods of time. But because of the power of Nintendo 64, it would be interesting to have some kind of experience for the system – maybe something with two disk drives...

Edge: Are there any other accessories or peripherals that you would like to see introduced for Nintendo 64?

SM: Nintendo is and always has been a toy company and manufacturer. We are now showing the 'Jolting Pack' and it is enjoyable, but also very simple and very cheap, and this is important. I can't say that we have any concrete plans, but it's always an interesting idea for Nintendo to release some kind of toy-like peripheral for Nintendo 64, as long as it is affordable enough for the general public. As for the VR-style headset that you mentioned, or anything like that, then sure, it is possible to release an affordable version, but the quality of headset that we would want to release would not be affordable.

Edge: In the west right now, the emergence of online gaming has become a very significant development, with sometimes many hundreds of players playing at the same time. Is this something that excites you, and have you thought about trying to design such a game yourself?

SM: In the long run, I would be interested in this. But Nintendo is in the mainstream 'plug-and-play' entertainment business and there is a long way to go until online multiplayer games are the main focus of the business in this specific market – it's just too difficult for consumers to get started. Although nowadays many people are buying CD-ROM games, they're still complaining that they have to wait a lot of time between switching on their machines and then playing the game. There are also many other things that we have to go through before we can establish some sort of mainstream entertainment market.

In Japan right now, the miniature-type LCD *Tetris* games represent a huge market, and this is largely because they are very simple to play and when kids get tired of them, they can just throw them away – they only

When we started out, we wanted to make a kind of 'two-and-a-half dimension' game for the Nintendo 64

cost around ¥1,000 [approx. £6]. I believe that this is the destiny of the videogame entertainment market, because if it is cheap, easy to try, and simple to play, then people will tend to buy it. But if it is rather complicated and troublesome to start something new, then it will be a long time before it will become a mainstream entertainment market.

So let me say that technically, I am interested in online gaming, but I am more interested in the videogame experience whereby four players can play the same game simultaneously in front of one TV set.

Edge: Are you satisfied with Nintendo 64's power to handle this, in *Super Mario Kart 64*, for example?

SM: I don't think that it's enough, but I think it's doing a fairly good job.

Edge: Are there any plans to introduce a satellite system for the Nintendo 64, similar to the one in place for Super Famicom?

SM: Technically, it is okay. There is no reason why we couldn't send information via satellite to N64s. So if the disk-drive system is sold, then we can make some games applicable.

Edge: What can we expect from *Super Mario 64 2*?

SM: [Laughs]. It may be cheaper, because it could be adapted for release on 64DD. But give me some time after I've finished with *Zelda* and I'll think about *Super Mario 64 2* some more!

Edge: Is *Zelda 64* your number-one priority right now?

SM: I think that I'm giving the same priority to both *Zelda* and *Star Fox*.

Edge: What was your involvement with *Super Mario Kart 64*?

SM: I was the producer, but we had a very good director for that game, so it was kind of an easy job for me. The director sometimes consulted with me, but largely I didn't have to do much.

Edge: Are you interested in creating more original games, or are you perfectly happy to continue producing 64bit updates of 8bit and 16bit Nintendo classics?

SM: Well, you can tell that *Wave Race 64* is a completely different game from the original Game Boy version. But yes, although we do sometimes opt to adapt old game titles; I'm always looking for something very original.

Edge: Given that the Nintendo 64 was designed primarily as a 3D game system, why the decision to make *Yoshi's Island 64* a 2D game?

SM: When we started software development for Nintendo 64, we wanted to make a kind of 'two-and-a-half dimension' game, because this would be easier for the consumers to start playing with. Eventually we finally decided that this game would be *Yoshi's Island 64*.

The original *Yoshi's Island* for the Super NES used the FX chip because we wanted to do all sorts of things with the game, but still, there were many things we just couldn't do because of the limitations of the old hardware. So we really want to introduce these features – and realise our original concept – in a finished version of *Yoshi's Island* for Nintendo 64.

3D graphics are fine, but for *Yoshi's Island* we really want to have more artistic graphics, so that the game is more like a moving picture, or something like that. And this means doing it in 2D.

Edge: So did you experience frustration with the artistic limitations of polygon 3D while developing *Super Mario 64*?

SM: No, I'm not saying that. It's not a matter of liking or disliking polygons. Polygons offer a kind of 'solid' graphics, and if you like it that's all right, but texture-mapped graphics are always limited to set ways, and they will always look similar.

However, when it comes to 2D graphics, there are a variety of ways in which you can paint the original pictures that are used in the game. You could use airbrush, you could use pencil, you could use chalk, or many other ways; you can paint the pictures in any way you like.

As you can see in *Yoshi's Island 64*, we have used what we call 'cardboard art' – and it's only with a 2D game that we can have this kind of rich expression in the graphics.

Edge: Nintendo's rivals have also released 'two-and-a-half dimension' games – the most obvious examples are *Crash Bandicoot* and *NiGHTS*. What do you think of them?

SM: It may be one solution to the 3D game, and I think it may be easier for both consumers to play the game and maybe for game programmers to make their games in this way. But with the games you mention, I think it is simply a matter of us and them aiming in different directions and having different goals.

Edge: Just how hard do you work?

SM: I never sleep! [Laughs.]

Edge: Are you still as enthusiastic about making games as you were ten years ago?

SM: I have become very lazy. [Smiles.] But I think that on my own terms, I am doing my best – although it may only take 80% of the energy that I was spending ten years ago.

Edge: And do you think that you have become a better game creator?

SM: Sometimes I have to realise that I am merely repeating what I did ten years ago.

Edge: Do you think that games themselves have improved, or is it simply the case that constantly improving graphics give the illusion that games are evolving?

SM: In general, games are making progress. It's hard to say, though. My basic policy of making games is to create some kind of 'miniature garden' –





and this concept has remained the same for me. But regardless of how much technology improves, it will never catch up with my original concept.

Edge: Why do you think that Japanese game development for the Nintendo 64 is so far ahead of American and, to a lesser degree, European development right now?

SM: Do you think that's the case?

Edge: Certainly there's a difference between Nintendo's own games and everyone else's.

SM: That's because we are working very hard! [Laughs.] We have a great many thirdparties working around the world and I think they are technically very good. I think that if they learn to tune-up the final and minute points of their videogame programs, then they could become very, very good.

Actually, when it comes to the Japanese engineers' level of expertise for 3D computer technologies, they are way behind that of American and European engineers. This is probably because the tools were completed by non-Japanese people and the Nintendo 64 development manuals were written in English and non-Japanese languages. But I think that within a year or so, Japanese 3D will be up to the standards of the rest of the world.

Edge: Do you think that Japanese – or maybe just Nintendo – game designers have different priorities?

SM: I don't think so. It's not like the past when the most sophisticated and technically advanced games could appear only on PCs [and hence typically in Europe and the United States]; nowadays the home consoles are just as powerful and the market is just as large, so there is not so much difference in priorities.

Edge: Looking around Shoshinkai today, considering the standard of N64 games, and thinking back to 1981 when you were working on the original *Donkey Kong* coin-op, did you have any idea that anything like this would ever happen?

SM: No, I wasn't thinking about anything like this – and I had no idea that all this would happen. It was unthinkable in those days that the computer graphics made by Silicon Graphics or Alias would be available for home use.

Edge: Nintendo has traditionally targeted kids as its main consumer base, and the Nintendo 64 looks unlikely to break with that tradition – you say yourself that Nintendo is essentially a 'toy company'. So as you get older, are you finding it more difficult to stay in tune with what children want?

SM: I don't think so, because I still want to buy toys! E

Hideki Konno

When Shigeru Miyamoto talks about having a very good director for *Mario Kart 64*, he's referring to this man...

While producer Shigeru Miyamoto has undeniably made a valuable contribution to the *Mario Kart* lineage, **Edge** tracked down its true creator, the game's director, **Hideki Konno**, to see just what can be expected from the N64 version...

Edge: In terms of using Mode 7, *Mario Kart* was essentially a 3D game already. Did this make it easier to create than *Super Mario 64*?

Hideki Konno: *Super Mario 64* and *Mario Kart 64* are two entirely different games. We used Mode 7 for *Super Mario Kart*, but it was not actually 3D. The N64 made it easy to produce 3D characters and 3D backgrounds. However, as we had more freedom in expressing the 3D world, we had to put in a lot of effort to construct and realise the 3D world that we wanted to present to the player.

Edge: What were the prime development objectives during the making of the sequel to *Super Mario Kart*?

HK: There were many things that we wanted to realise on *Super Mario Kart* but couldn't because of the Super Famicom's limitations. We wanted to include all those effects that are in *Super Mario Kart 64*, such as making the tracks go up or down so that karts can jump, or placing tunnels on the course.

Edge: How does the 64bit hardware make it possible to imbue *Mario Kart 64* with gameplay features beyond the Super Famicom version?

HK: The environments themselves add to the gameplay because the action no longer takes place in a flat world. Plus, though it may be difficult to tell, the other drivers are much smarter than before, as they are being handled by a 64bit CPU working at 93.75MHz. Also, fourplayer racing and battle modes were impossible without the N64's performance.

Edge: What frame rate per second will the game run at?

HK: On average the game runs at about 30 frames per second, but the frame rate depends very much on the individual game mode.

Edge: What do you think are the game's most exciting features?

HK: Competing with your friends. This is the first kart racing game you can play against three friends at once [apart from the UK-developed *Street Racer*]. That's why we're including one 3D stick controller in the cartridge package. As soon as you purchase the game, you can compete with your friend. You'll soon realise why we wanted to give the N64 four controller ports.

Edge: What modes will the game have?

HK: Basically, the same as *Super Mario Kart* – including the Battle Mode and Phantom Mode.

Edge: What feature are you most proud of, and why?

HK: Although people may anticipate that the game will be just a sequel to *Super Mario Kart*, I believe we've constructed a very unique new world without destroying the really fun elements of the original game. There will be 20 different courses, each of which will be different. In *Super Mario Kart*, we weren't able to have so many courses, so we modified course layouts using the same scenery so make them look different.

Edge: With the original *Mario Kart*, realism wasn't a problem, but couldn't the uninitiated out there now ignore *Mario Kart 64* simply because it looks too cute compared to realistic racing games such as *Ridge Racer* and *Sega Rally*, etc?

HK: Maybe, although there are the extremely familiar characters from the *Mario* series. We've made it very challenging, so you could say that *Mario Kart 64* is a wolf in sheep's clothing. E



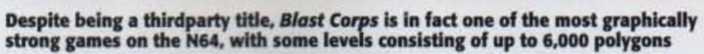
Blast Corps

Rare's second N64 title (after *Killer Instinct Gold*) mixes a 'Thunderbirds' emergency scenario with racing, exploration and, most importantly, a healthy dollop of demolition









Despite being a thirdparty title, *Blast Corps* is in fact one of the most graphically strong games on the N64, with some levels consisting of up to 6,000 polygons



Blast Corps is something of a return to roots for Rare. Though the outfit's reputation was built on a slew of technically advanced and innovative 8bit games, its recent titles — notably the *Killer Instinct* and *DKC* series — have been safe, albeit hugely successful, essays in established genres. *Blast Corps*, however, is highly original. 'Doing something original was very important,' says designer Martin Wakely, 'but there also had to be substance.'

The basic aim of the game is to use the Blast Corps of the title to clear a path for an out-of-control missile carrier. Players have 18 different craft at their disposal, ranging from traditional construction vehicles such as tipper trucks and bulldozers, to armoured suits and Akira-style motorcycles. The Blast Corps also have to find and destroy other key buildings on each of the 60 levels and activate the 100 radiation dispersal units spread around each level.





Each time a building is successfully destroyed, a cash award is added to your score (above left). Of the 18 available modes of transport, jetting around cityscapes in this giant robot (above right) is easily one of the most entertaining

Format:	Nintendo 64
Publisher:	Nintendo
Developer:	Rare
Release:	Spring '97
Origin:	UK



When played with a Jolting Pack plugged into the rear of the controller, *Blast Corps* is a shuddery experience at times like this

The basic aim is to use the Blast Corps of the title to clear a path for an out-of-control missile carrier

There are also communication points which lead to bonus levels that are designed to train the player in skills needed in later levels. Bonus levels include time attacks, vehicle handling tests and racetracks where players can opt for speed or destructive power in a bid for the fastest times. Bonus vehicles are also concealed around levels and there are even bonus levels off the bonus levels.

Further layers are added to *Blast Corps* by the six scientists hidden throughout the game. 'Each one found will give a clue to the whereabouts of the next,' explains Wakely. 'Once a path has been cleared for the carrier and all six scientists have been found a controlled explosion can take place.' This ends the first part of the game and next the Blast Corps head for the moon to clear debris for an emergency shuttle landing. Winning all the bonus levels opens up more levels — set in deep space — and turns the original levels into time attacks.

The unusual game concept — blending exploration, racing and destruction — came not from old episodes of 'Thunderbirds' but from 'generally playing lots of games and getting bored with playing the same old thing time after time,' according to Wakely. 'This led on to various ideas about destruction and construction games and perhaps using the kind of vehicles which most young children seem to be fascinated by to weave a new type of game around.'

Rare started work on *Blast Corps* at an early stage in the N64's development and found that working in a true 3D environment took some getting used to. 'There are no backgrounds, just foregrounds,' says Wakely. 'This means the player can interact fully with any of the 5,000-6,000 polygons on each level, and with 60 levels, it requires a great deal of modelling.'

Technically, *Blast Corps* makes full use of the N64's anti-aliasing, mipmapping, reflection mapping, lighting and blending. 'We've had to consider many efficiency issues while designing the game,' Wakely concedes. 'One important task is to make best use of the parallelism that's possible between the CPU and the math and rendering engine.' The game will be released on a 64Mbit cartridge and Rare claims the size of the cart wasn't much of a limitation. It should run at a steady 30fps — the lack of FMV and sprites (apart from the explosions) and the N64's strong data compression contributed to this.

Nintendo only became involved in *Blast Corps* towards the end of development. 'Mr Miyamoto takes an active interest in all Rare products, so we do receive feedback from him and NCL assist with 'game balance' which usually means making things easier for the US and Japanese markets,' says Wakely.

With help like that, Rare's newest title has a lot of potential. E





The out-of-control missile carrier (top). One of the game's varied vehicles (above)





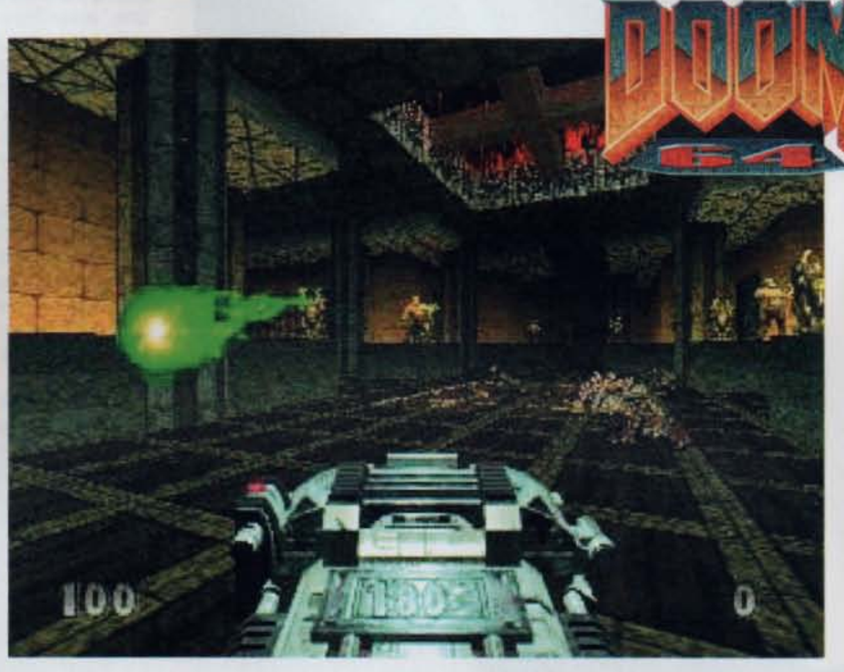
The action in *Blast Corps* is viewed from a variety of angles, befitting the powerful 3D capabilities of the N64 – this imminent train/missile carrier interface (above left) is in marked contrast to a more serene scene (above right)

Doom 64

One of the most well-worn and well-known games in history has made its way into the N64 line-up. How will yet another version of *Doom* help the fledgling console?







You'll find all the old familiar elements in *Doom 64*, but the monsters, traps and rooms have all received a facelift. Disappointingly, the monsters are prerendered sprites, not polygons

Having appeared on just about every modern-day platform, *Doom* is in danger of picking up the award for the most exploited game property ever. Even PC owners, who took the original *Doom* to their hearts all those years ago, would concede that it's time to throw in the towel. For Nintendo, however, the *Doom* label ads a vital extra dimension to its lineup: ultra violence. It's the perfect antidote to the flock of cute Japanese titles that have so far given the N64 a distinctly child-like feel when compared to the PlayStation, for example.

Unlike Acclaim's *Turok*, *Doom 64* doesn't use polygons in generating its monsters. The impressive geometry has been reserved for the environment, which,





While the game's environments can't be viewed via up/down controls, they're still set to be one of its trump cards, with some superb, coloured lighting effects. Midway also promises many more hidden rooms and devious traps



Format:	Nintendo 64
Publisher:	Midway
Developer:	In-house
Release:	TBA
Origin:	US









These open areas are especially impressive and perfectly show off the game's true-3D scenery. An extended scripting facility yields all kind of moving structures (right)

Doom is the perfect antidote to the flock of cute Japanese titles that have given the N64 a child-like feel

although still limited (you can't look up and down), is true 3D. It would be an understatement to say that the lack of polygon monsters is something of a disappointment, but Midway seems confident that it has made the right decision. Head artist **Sukru Gilman** told **Edge**: 'We didn't want to limit the gameplay. You can have a lot more monsters chasing you. You can open up a door and 60 monsters can all come rushing out at you, as opposed to 3D polygon foes, where you can only fight two or three at one time.'

In retrospect, id's *Quake* did suffer from precisely that problem in oneplayer mode. What made the original *Doom* so compelling (and scary) was the sense of being overwhelmed by a tide of bloodthirsty creatures. Taking them on one at a time proved to be monotonous in *Quake*, and if *Doom 64* can bring back that primal fear, the trade-off may well be worth it.

The monster sprites have all been rendered on SGI gear, with pixellation kept to an impressively low level, and Midway promises a number of all-new weapons and monsters to help maintain the player's interest.

The compromises should pay off in giving the programming team the processor space for incredibly complex levels, laden with traps, secret passages, teleports and keys, which should make for a stiffer challenge. But although level design is something that id never had a problem with, how will the game feel now Midway has taken over? VP of software **Mike Abbot** isn't worried. 'We worked hand-in-hand with id,' he told **Edge**. 'All the levels and art originated here at Midway. Id suggest the odd change here and there, but they've been quoted as saying they're the best they've ever seen.'

To maintain confidence in thirdparty support, this latest version of *Doom* will have to capture gamers' imagination one last time. It won't be easy, but there's no finer example of addictive gaming than id's ageing masterpiece.





Sometimes it can all seem a little *too* familiar. Will *Doom 64* offer anything new?



If *Doom 64* used polygon geometry for everything, including its monsters, it would provide one of the most realistic-looking games yet

Deathtrap Dungeon

Eidos Interactive is about to follow *Tomb Raider* with a hack-and-slash adventure based on the Penguin Fighting Fantasy novels. Ian Livingstone, who pioneered the books, is on the team...







The monsters vary from tiny goblins to huge, 400-polygon dragons. The environments, too, are huge, their vast scale dwarfing the characters

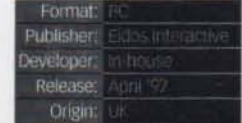
When Ian Livingstone created the Fighting Fantasy books in 1982, Penguin was understandably nervous about the strange game/novel hybrids. It printed only 5,000 copies of the first book, The Warlock of Firetop Mountain, which promptly sold out, as did the next 5,000, and the next. As they caught on in every playground in the land, Penguin realised that it had a hit on its hands. An incredible 59 sequels and 14 million copies later, Ian Livingstone is working with Eidos and a computer game version of *Deathtrap Dungeon*.

Based on the third Fighting Fantasy book, the game fuses the thirdperson 3D of *Tomb Raider* with hack-and-slash combat, key searches and weapons power-ups, and boasts some of the biggest levels yet seen in a PC title, with cavernous rooms that dwarf *Quake*'s and monsters of startling complexity.

There are, for example, a number of dragons that must be slain in the end-game. Constructed from 500 textured polygons, each circling, attacking, flying and fire-breathing beast is superbly animated. Needless to say, only one of them will be flying around the screen at any one time to protect the frame rate, which the development team hopes to keep between 16fps and 20fps on a



One of the end-game monsters – an absolutely enormous blue dragon-hydra



Format:	PC
Publisher:	Eidos Interactive
Developer:	In-house
Release:	April '97
Origin:	UK



This provides some idea of the scale of *Deathtrap Dungeon*'s versatile creatures



The realtime lighting effects are state of the art, casting realistic shadows and throwing the atmospheric dungeon into stark relief

low-end Pentium in standard VGA. The game will support *Direct 3D*, which should offer those with a 3Dfx card or similar a 30fps SVGA experience.

Atmosphere will be crucial, and Livingstone has been heavily involved in the dungeon design, working closely with Richard Halliwell of Games Workshop to give each of the 16 levels its own unique style. One level, for example, has Doric columns, fountains and gorgons on the walls, while others are bizarre Victorian tunnels populated by 'steam-punk' robots. **Edge** has even spotted a shotgun — a significant departure from the novel, which drew the line at crossbows.

Like many other PC developers, Eidos is building accelerated graphics features into its software. *Deathtrap Dungeon*'s realtime lighting and transparencies are impressive, allowing for bleak tunnels with eerie, flickering, candles and strange, floating beads of light that cast animated shadows onto walls.

Ian Livingstone is keen to produce an instantly accessible game that remains true to the spirit of the books, which relied on a simple mix of puzzles and quick combat. Thus, gameplay is weighted in favour of battle and has more in common with Scavenger's proposed *Into the Shadows* than the dungeon quests of *Eye of the Beholder* or *Ultima Underworld*. The player's character has a number of basic moves, as well as spells with which to dispatch the myriad monsters he (or she) encounters. **Edge** hopes the puzzles will be satisfying enough, as most seemed to be of the find-the-key variety, with the ultimate solution to many of the levels requiring only swordsmanship. It would be a pity if such an impressive gathering of programming and design pedigree produced nothing more than a roving beat 'em up.

Eidos is keen to emphasise that Core, its key developer, is not in competition with the Eidos internal development team, but **Edge** did detect a healthy competitive atmosphere in the firm's dungeon-like studios. The 3D engine certainly looks very similar to the one seen in *Tomb Raider*, but both titles have been developed in isolation and would have been released in tandem had Eidos not insisted on a number of last-minute improvements.

If Ian Livingstone can bring even half of the energy to the game that he expended on the books, *Deathtrap Dungeon* will be just the beginning...

Ian Livingstone

The man himself on his move from children's books to videogames...

'After the success of Games Workshop, I retired, got bored and invested in Domark to fund their cartridge development. I got in at just the wrong time — it was all going flat. I was never a big computer games person. I still love board games and roleplaying games. I like the interaction of face-to-face gaming.

'My whole life, I'm sad to say, is games. I certainly put a lot of effort into *Deathtrap*. I was very involved in the design document. I got a few of the Games Workshop guys in to help with that too. I'd say, 'I want this kind of engine, or that kind, or this art style and those monsters' — I can't program, unfortunately. I'm not a very big fan of adventure games where you've got to do six random events to move forward or solve a puzzle. I like logical puzzles.'

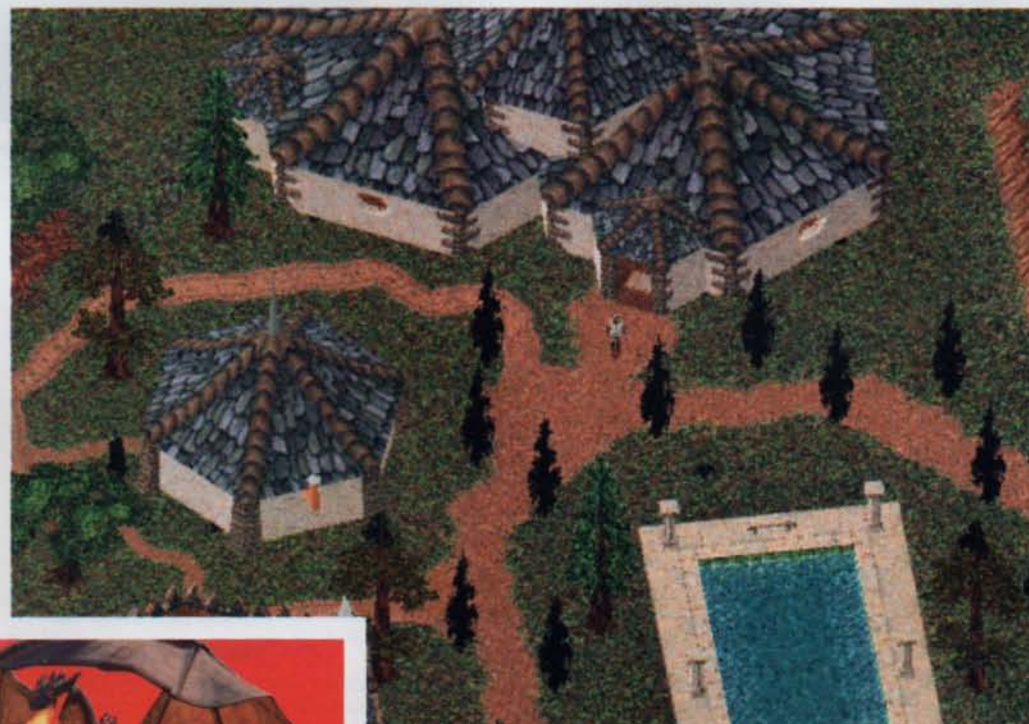


Due to the size of the adversaries, many battles will only involve one monster, but they vary considerably – this hand (right) is very odd



Ultima IX

After two years of relative inactivity, the PC RPG is back. In the face of competition from *Diablo*, Origin will be looking to dominate with the return of its near-legendary *Ultima* series



Although visually similar to *Ultima VIII*, *UIX* employs totally 3D maps and characters, allowing a multitude of camera angles and zoom magnifications

To help the story of *Ultima IX* along, Origin's artists have created some breathtaking rendered film sequences using SGI and 3D Studio

If the law of diminishing returns is anything to go by, *Ultima IX* should be terrible. It should be the 'Police Academy VI' of videogames — devoid of originality and inspiration; a desperate attempt to squeeze the last ounce of life out of a well-worn series.

However, Richard Garriot, the creator of the *Ultima* series, has never been one to milk ideas until they're sour. His aim with instalment number nine is to examine the strongest features of each *Ultima* and outdo them all in one final chapter. From what **Edge** has seen, these aims appear not to be wildly over-optimistic.

For a start, the plot promises an epic mix of Tolkien-esque imagery and D&D sensibilities. Here, the player takes on the role of 'The Avitar', a warrior from the second trilogy of *Ultima* adventures. His quest is to travel across the mythical world of Britannia (the perennial *Ultima* setting), gathering enough strength and knowledge to vanquish the evil Guardian, a god-like being of incredible power. The twist is, the guardian is attemping to turn Lord British, the realm's benign ruler, against the player, which will inevitably make things a lot more tricky.

Visually, *Ultima IX* is perhaps closest to *Ultima VIII* due to its similar use of an isometric perspective. Whereas *UVIII* employed sprites and prerendered graphics, however, *UIX* generates everything, including characters, in true 3D. Not only does this give the game a more grittily realistic feel, it also means the map can be viewed from different camera angles, so players never lose The Avitar behind scenic obstructions.

What impresses most, though, is the visual imagination at work. There are





The combination of 3D graphics for gameplay and prerendered animation for storyline should serve *UIX* well

Format:	PC CD-ROM
Publisher:	Electronic Arts
Developer:	Origin
Release:	August '97
Origin:	US





***Ultima IX* features a highly recognisable list of 'swords 'n' sorcery' beasts and characters. Enemy soldiers, for example, ride dragons (above) rather than horses**

***Ultima IX* features several cities, each with its own visual theme. The aim is to create a varied and totally immersive world for the player to explore**

several cities in Brittania and each one has its own consistent visual theme. Cove, for example, is filled with 'back to nature' hippies whose houses are built into trees, giving the town a warm, woody look, while Asylum is inhabited by pirates and consists entirely of ship parts, and Moon Glow is all tall spires and floating platforms. According to the designers, this level of imaginative detail appears throughout Britannia, not merely in isolated pockets — particularly impressive considering the map is 256x256 screens, and that's not including the dungeons…

Ulitma IX is also full of recognisable RPG bunkum. Lengthy character statistics and inventories instill the game with an AD&D complexity noticeably missing from the action-oriented *Ultima VIII*. The Avitar can learn up to 20 skills thoughout the game, including swordplay and magic, and certain skill areas can be specialised in. A short sword specialist, for example, will be more accurate and cause more damage with that weapon than with another type of sword. *Ultima IX*, then, promisies to be a rich RPG title rather than merely another hack 'n' slash experience.

Which is not to say there is no violence in the game. There are in fact plenty of creatures available for slaughter, and once again great imagination is at work. Monster plants grow out of soil and spit seeds which develop into huge Venus Avitar Traps; bats employ a vicious sonic attack which provokes terror in all that hear it (psychological damage is something rarely explored in computer RPGs); and, best of all, seemingly harmless doors morph into hideous monsters which consume all the player's objects and weapons. A great menagerie of foes.

Despite the obvious depth of the game, its interface remains comparatively simple. As in *Diablo*, simply clicking where the hero is intended to go results in him acting accordingly. In *Ultima IX*, though, the further away the location clicked, the faster the hero approaches. This factor also gives the character a quick escape option if surrounded by enemies.

If escape is not an option, The Avitar is followed throughout the adventure by several computer-controlled friends who provide assistance in difficult situations. This feature has appeared in other *Ultima* titles, but now each one has his own personality: some run from fights, some can't be dragged away even if they're being soundly beaten. It's another interesting detail, making the player feel much more a part of a real, living world.

So it appears that Garriot has acheived what he set out to do — to create an *Ultima* which uses all the best tricks of the series so far, but supplements them with an arsenal of new features. Although *Diablo* looks similarly promising, *UIX* is obviously aimed at players who want a mentally demanding adventure as well as a sword fight. Despite its intellectual leanings, though, it looks more than capable of giving the 'diminishing returns' law a bloody good kicking.





***UIX*'s rounded RPG gameplay apparently combines fighting with plenty of strategic and puzzle elements**

Parallel Projection

The huge amount of polygonal detail evident in *Ultima IX* owes much to the game's parallel projection system. There is no true perspective scaling — objects at the back of the screen are as big as similar objects at the front. This means the PC has a lot less maths to deal with and can therefore throw out more polys at a quicker rate. Consequently, each screen in *UIX* contains an impressive 2000-3000 polygons — and the game still manages to run at 25fps in 640x480 SVGA on a P100.





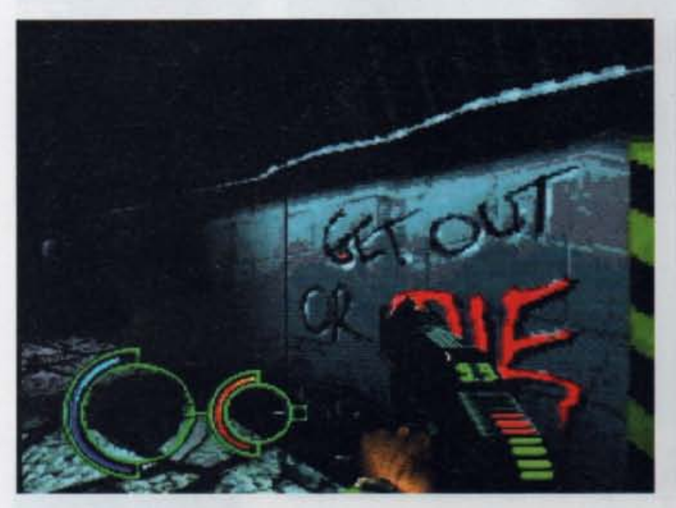
Its true isometric display allows *Ultima IX* to display up to 3000 polys on screen at a time with no slowdown



Tenka

It's been a long time coming, but Psygnosis has almost finished what is set to be one of the biggest 32bit titles of the year.

Complex locations, well-designed enemies and atmospheric music abound in this, another potential *Doom*-buster





There's no question that the 3D engine employed in *Tenka* is far superior to that of *Doom*, *Kileak* or the more recent *Disruptor*. It offers full freedom of movement, with players able to look up and down, as well as strafe, jump and crawl through the complex, shadowy environment with ease





Although not centrally placed on-screen, weapons have a realistic look and feel

That stalwart genre of mid-'90s videogaming, the *Doom* clone, appears to be undergoing yet another renaisssance, with *Disruptor* here, *Turok* not far off, and *Tenka* on the horizon.

Yes, the 'thinking man's *Doom*' has reached Beta stage at last, and **Edge** has paid witness to a second sneak preview. The game was first shown in Techview some 12 months ago, when very little was known about how it might eventually look. Back then, fears were expressed over texture and polygon warping, over the lack of adventure titles for the then-fledgling PlayStation and of the continued culture of graphics over gameplay. In that respect, little has changed.

Tenka's trump card was always going to be its combination of stunning 3D graphics and equally assured gameplay. The Beta copy **Edge** has played is certainly visually impressive. Psygnosis has delivered a 3D engine which far surpasses that of *Doom* and the more recent *Disruptor*, allowing the player to look almost vertically up and down (but curiously, *Tenka*, the main character, has no feet). All the monsters, which seem to vary considerably in modes of attack and size, are polygonal, which should give the game that essential 'next-gen' feel.

However, while it's still too early to predict how the finished product will look and feel, there are a few potential problems with the gameplay at this incomplete stage. Since *Tenka* was first proposed, the emphasis has firmly been on adding some much-needed depth to the firstperson shoot 'em up, but precious little of that appears to have made it into the later stages of development. Tasks are, at this time, confined to picking up keys and shooting a variety of clumsy monsters, most of which currently exhibit little intelligence or cunning.

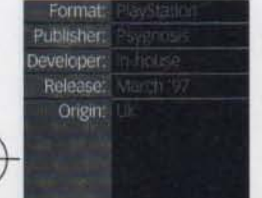
Of course, it's likely that there are still a few AI routines waiting in the wings: these elements often take the longest to perfect, and other game elements may have to be perfected first. It is, then, impossible, not to mention unfair, to make definite judgements at this point.





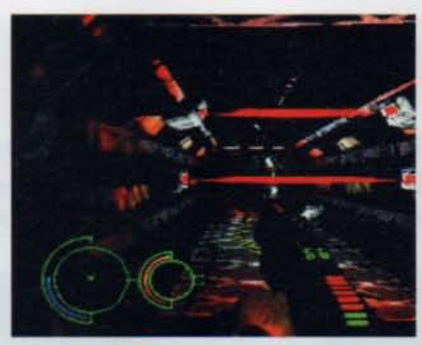


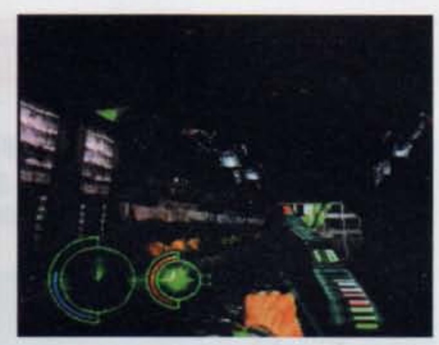
The polygon enemies look good both at a distance and up close, but they lack intellignece, subtlety and a few frames of animation



Format:	PlayStation
Publisher:	Psygnosis
Developer:	In-house
Release:	March '97
Origin:	UK







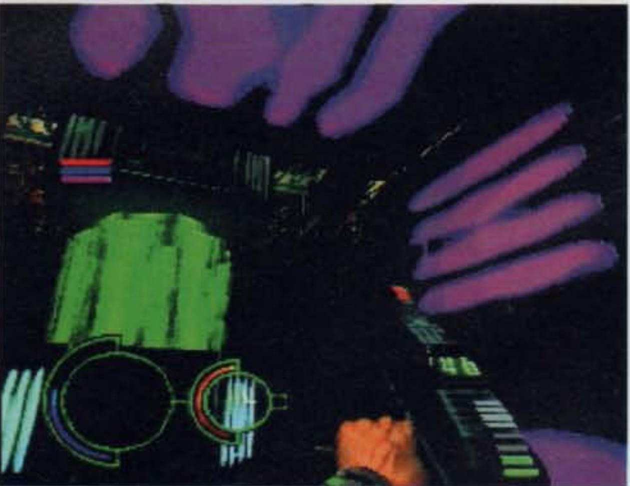
The action centres around running through corridors, shooting various alien creatures, and picking up keys. Sound familiar? It should do, but if *Tenka* is to bring anything new to the table, then its basic design will have to be improved considerably. Technically, though, it's impressive

Hopefully *Tenka*, with its promising dark-future plot (innocent humans are turned into bionic soldiers by an evil corporate entity), has not fallen foul of release schedule pressures. Producers have very short attention spans and will no doubt be screaming for a straight-up PlayStation *Quake*. This would be a big mistake, as the console, with its lack of comprehensive networking capabilties, simply isn't fighting on the same ground as id's PC blaster.

Early concerns aside, though, there are some genuinely nice touches, such as coloured lighting, air ducts to climb through and some scary-looking monsters. Sound is extremely good, too, with atmospherics and music that should surpass those of *Doom*. To emphasise this aural quality, Psygnosis has built in Dolby Pro-Logic surround-sound support, which makes running through the maze-like corridors quite an intense experience.

All this will count for nothing, though, if Psygnosis continues its indecision. *Tenka* could turn out to be either a *Doom* clone or something refreshingly different. The latter would be preferable.







The lighting is low-key throughout. Enemies appear from dark doorways, smash through glass walls and snipe from towers



The true 3D environments are incredibly well designed. The textures warp a little, but the sense of immersion is amazingly complete. Coloured lighting is used to add atmosphere, and the sound is some of the best to grace the Sony console since Psygnosis' futuristic racer, *Wipeout 2097*

BIOHAZARD 2

Capcom's atmospheric shooter, *Biohazard* (aka *Resident Evil*), was a masterpiece of gore, and its successor looks like following in the same honourable tradition, with new characters, better visuals and even more monsters...







Despite concerns that the game could be heavily censored, *Biohazard 2* seems to at least equal its predecessor in gory detail. Different weapons (collectable throughout) now wound zombies in different ways – some cause small bullet wounds, while others blow the undead fiends to pieces



During the game, cops and would-be rescuers gradually mutate into undead monsters

Until recently, it looked as if Capcom would never produce anything but 2D beat 'em ups. It took one of the scariest, most atmospheric games ever (called *Resident Evil* in the West) to break the mould.

The inevitable sequel is already 40% complete. Out go Chris and Jill, the characters from the first game, and in come Leon (a rookie cop) and Elza (a university graduate). Trapped in Lacoon city police station, the heroes are up against another slew of zombies and terror-inducing creatures.

The characters can change their clothes throughout, donning bulletproof vests and fire suits when the need arises. And it seems that the need arises quite frequently. As in the original title, you spend plenty of time shooting zombies, but here there are more of them and they all act differently — some now break into a sprint when your back's turned.

Biohazard 2 boasts a number of other improvements. It's around one-and-a-half times bigger, for a start, with many more rooms and some suitably grim locations. Visually, the whole game has received a makeover — camera angles, lighting and background details have been redesigned and updated, giving the game a heightened and unsettling realism.

With the promise of more absorbing puzzles, new monsters (including a thrashing crocodile) and a host of interesting weapons — each of which damages zombies in a different way — *Biohazard 2* must surely be the most eagerly awaited PlayStation sequel since *Tekken 2*. **E**





In *Biohazard 2*, players often face several zombies at once, all of them displaying different behavioural patterns. It's a far cry from the lone, predictable and lumbering creatures which inhabited the first game



Format:	PlayStation
Publisher:	Virgin
Developer:	Capcom
Release:	March '97
Origin:	Japan

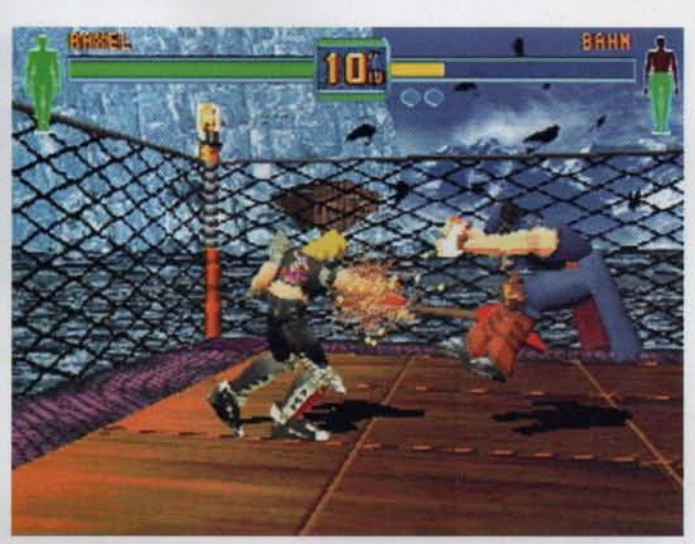
Fighters Megamix

Sega is counting on a strange hybrid of titles from its premier development team, AM2, to rescue its Christmas. But will it offer more than just a remix?









Fighters Megamix **features characters from** ***VF, VF2*** **and** ***Fighting Vipers,*** **as well as ten original creations and a number of extra moves carried over from Sega's latest addition to the beat 'em up hall of fame,** ***Virtua Fighter 3***





Fighters Megamix **is less of a remix than a highly specced hybrid of three favourites**

Virtua Fighter Remix was something of disappointment when it was released in February '96, offering no new moves and no new characters. Although *Fighters Megamix* sounds suspiciously like a similar cash-in, it will offer a good deal more value for money. Not only is it a redesigned version of *Virtua Fighter 2*, but it contains extra characters from stablemate *Fighting Vipers*, plus a number of all-new moves.

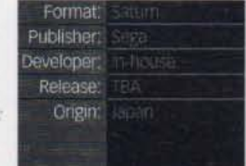
In keeping with the current arcade beat 'em up trend, the game will feature a number of selectable modes, such as the now-common survival and team-battle modes, as well as a special training mode. The inclusion of extra characters brings the total to a staggering 32 — 11 from *VF2*, 11 from *Fighting Vipers* and ten new fighters. The latter have yet to be named, but Sega has confirmed that they will be based on previous AM2 creations.

All the *Fighting Vipers* models will possess new moves, and each character will be able to perform the *Virtua Fighter 3* escape manoeuvres. A fourth button will allow for sidestepping to avoid incoming attacks, which will be complemented by the *Fighting Vipers* recovery move, allowing characters to recover in mid-air when sent sprawling by their opponent.

The inclusion of updated *VF, VF2* and *Fighting Vipers* stages provides yet more variety and confirms that *Fighters Megamix* will be a hybrid game of impressive proportions. Unlike *Virtua Fighter Remix* and even *X-Men Vs Street Fighter*, *Megamix* should offer both an enhanced and original experience, and although not a pure sequel, will provide some comfort for those Saturn gamers eagerly awaiting *Virtua Fighter 3*, which is still a year away.



The arenas, too, are taken from all three titles, and all are optioned, allowing for ringouts and a choice between fences or no fences



Format:	Saturn
Publisher:	Sega
Developer:	In-house
Release:	TBA
Origin:	Japan

Multi Racing Championship

The Nintendo 64's stride appears to be quickening, as another gorgeous-looking driving game rounds the corner. Will Imagineer's effort have gameplay to match its looks?



Top-drawer driving games have long been among the strengths of the PlayStation and Saturn. *Multi Racing Championship* is taking on the 32bit consoles in their own territory by presenting rally-style environments, albeit with excessive visuals







Cars will feature the typical range of game and company logos seen in racing games

Format:	N64
Publisher:	Imagineer
Developer:	Genki
Release:	June '97
Origin:	Japan

Imagineer's *Multi Racing Championship*, set to appear in the summer of 1997, should provide the N64 with a much-needed cross between *Sega Rally Championship* and *Rave Racer*.

At this stage, the game looks extremely impressive – certainly better than Seta's *Rev Limit* (**E**37), not least because of the variety of its vehicles.

If they look at all familiar, it's because they're all based on European production road cars, such as Renault's Megane and the Opel Vectra. None will be credited as such, as no licensing deals have been struck, but in avoiding the clichéd, bland American stock car-type approach, Genki has ensured that *MRC* will have a unique look.

In addition to this, players will be able to customise their cars with a 'tuning' mode. This option allows for different brake, suspension, tyres, gear-box and engine settings, all of which can be saved into the controller memory pack. While this may sound like an option for option's sake, each course offers unique driving conditions and weather, ensuring that custom set-ups should prove genuinely useful when driving.

Powerslides will form a major feature of gameplay, forcing gamers to master this delicate art to clock the best times.

Obstacles, such as ramps, mounds and broken bridges, feature heavily and afford the player a more arcade-like feel.

Though game-camera views are limited to two at present (dash and follow-cam), the game is likely to offer a multitude of others in its finished state.

Developer Genki, whose most recent titles – PlayStation 3D games *Kileak the Blood* and *Beltlogger 9* – have been unexceptional to say the least, has its work cut out in producing a game to beat its 32bit contemporaries.

The Japanese developer will certainly be aiming to better the decisively lacklustre *Cruis'n USA*.



The N64's hardware allows for spot effects such as semi-translucent wheel-spin debris with ease. Gameplay is harder to program, though

Sub Culture

While many game developers concentrate on what goes on above water, Criterion is plumbing the depths beneath the waves. Its glorious-looking new PC title is set to literally sink *and* swim...



These in-game shots fail to show how amazingly smooth this game is – even in hi-res. It's not all combat, either







There's a huge variety of sea creatures in *Sub Culture*. Many are harmless, but others must be fought or avoided. The sense of being submerged is strong as the sub is piloted around the vast world







The 3Dfx version of *Sub Culture* is, needless to say, silky smooth and packed with detail

Sub Culture is the big ticket for Criterion, a company that is perhaps more famous for its 3D engine, RenderWare, than as a games developer, and there's a sense of urgency surrounding this release. From what **Edge** has seen of the game, that urgency would be better spent on promoting the title, as the graphics and gameplay seem to be developing well.

In common with Bullfrog's forthcoming *Creation* title and Blue Byte's recently released *Archimedean Dynasty*, *Sub Culture* is set beneath the waves.

Split into two sections, the game features a sizeable 3D terrain for the player to explore using a tiny one-man sub, from which to undertake rescue, reconnaissance and trading missions for one, or both, of two warring factions — the 'Techs' and the 'Trads'. There's a fairly obvious environmental subtext as well, with Criterion wagging its fingers at those who pollute the seas.

The mercenary plot has much in common with 8bit classic, *Elite*, allowing the player as much or as little freedom as they require. A plot rears its head every now and again in the form of specific missions and the ongoing tensions between the two tribes. Should the player do too many favours for the 'Techs', for example, he'll receive a frosty (not to mention violent) reception on entering 'Trad' territory next time around. Keeping an eye on loyalties will be a crucial part of the game if the lone sub is to make it through to the second stage.

Although the bulk of *Sub Culture* takes place in a beautifully rendered ocean, once all business has been concluded there, the player moves into the claustrophobic world of a human sewer system where two new tribes and a fiendish current system await.

Both the player and the tribes are part of a miniature civilisation. The hero's sub is dwarfed by the native sea creatures, which consist of crabs, poisonous jellyfish, and a dozen varieties of fish, turtles and mutant eels. All are fully textured 3D polygon models that move and behave in an unnervingly convincing way — so convincing, in fact, that many wasted hours are likely to be spent simply 'swimming' around with them.

With sound that gives the sub depth, night and day cycles giving the world a living feel and currents conspiring to create one of the most convincing game environments in a long time, *Sub Culture* could cement a reputation for Criterion in game-design terms to match its existing reputation for technology. **E**



Format:	PC
Publisher:	VIE
Developer:	Criterion Studios
Release:	TBA
Origin:	UK


DMA
DESIGN

GAMESPOTTING

Choose life. Choose a job. Choose a fucking big television. Choose Dundee as the place to base your software house. Choose to dump the game that made you. Choose to be different. Choose to be DMA Design

The buses and taxis are a different colour, but apart from that Scotland looks like any other part of the British Isles. No skagged-up Rentons or Spuds, no kilts, no tartan. Even Forth FM, the accompaniment on the drive from Edinburgh airport to Dundee, sounds ordinary. Anodyne jingles and a complete lack of Scottish burrs. Music? Cast and The Bluetones give way to some real Scottish music – Simple Minds' 'Don't You Forget About Me'. But this only summons thoughts of 'The Breakfast Club' and Patsy Kensit. (Though thinking of Patsy Kensit this early in the morning could perhaps be deemed nothing unusual.) Even Dundee Technology Park, home of DMA Design, is dull – an antiseptic collection of low glass buildings and inoffensive shrubbery. Things don't look very inspiring. DMA Design: the team responsible for *Lemmings* and... and then what?

'Don't ask anybody at DMA what their favourite game is,' bellows **Brian Baglow**, DMA's writer and PR man. 'Is it *Lemmings*?' 'No, it fucking is not!' **Edge** is in the office of **David Jones**, the frank and friendly head of DMA Design who expresses himself a little differently from Brian. 'We had to have a break for a while after *Lemmings*. Three years of hell.' But those three years of hell shifted 20 million copies of the groundbreaking puzzle game across 21 formats, including the original Amiga version, the C64 and Spectrum, and even the Sam Coupé and FM Towns.

The revenue from *Lemmings* has funded some major expansion here, not least in the car park, where no fewer than nine new cars sport DMA number plates. The company has also taken over two more buildings adjacent to DMA's head office. One holds the development teams and playtesters on three upcoming titles. The other houses



From left to right: Mark Rein, Jamie Bryan (DMA's head artist), Andrew Innes (lead programmer on *Body Harvest*), Keith Hamilton (project leader on *GTA*), Tom Kane, (*Tanktics* project leader) and David Jones

> 'WE KEPT THROWING STUFF INTO *BODY HARVEST* THINKING, "THIS IS ALL GOING TO FALL DOWN," BUT IT DOESN'T. I JUST DON'T WANT TO GO BACK TO DEVELOPING ON THE PLAYSTATION'

John White, DMA Design

DMA Music, an in-house music company with seven fulltime musicians, and DMA's own motion-capture studio. 'We got it about a year ago,' explains David. 'We had no intention of doing anything with it immediately. We knew it would take a while to get used to it.'

DMA may be the software house that *Lemmings* built but that's all in the past now. **Edge** is the first magazine to visit it in over a year and a half and there's a buzz of excitement around the place, with everyone eager to show off what they've achieved. 'I'm sorry,' jokes David, 'but we've got no fighting games and no driving games. Well, one. But it's a bit special.' When the team closed the book on *Lemmings* over two years ago, DMA initially focused on 3DO. 'That probably wasted about six months,' admits David. 'We did go for it quite heavily. We bought the development kits and started looking at titles, but then there were signs coming through that it wasn't going to do what it had promised. At that point we were quite lucky because Nintendo approached us to try some work on the Ultra 64, as it was then.'

According to **John White**, project leader on *Body Harvest*, DMA's first N64 title, the Nintendo machine is a dream to work on. 'We started on the emulation system on the Onyx and then moved onto the N64 itself. I was quite surprised that the N64 turned out to be a good deal faster than the £100,000 Onyx.' On a nearby Silicon Graphics Indy, someone expertly plays the latest build of *Body Harvest* for **Edge**'s benefit. It's set in Greece, in 1916, and the player's character leaps into a WWI tank and starts firing at an insectoid alien hovering overhead.

'We sat around and put all these ideas down and, y'know, usually, you have to throw a load of them out,' White reveals. 'But when we went to Shoshinkai last year and saw what Nintendo were doing, we came back and started chucking stuff back in. We keep thinking, "This is going to fall down," but it doesn't. I just don't want to go back to developing on PSX.' Now the onscreen hero has taken to the skies in a WWI triplane.

'The development system itself is pretty straightforward. It's just so... nice. Really powerful,' he adds. 'It's

▶

been really well designed and we haven't even scratched the surface. It's scary. The drawing chip is a masterpiece of engineering. There are no hassles for developers compared to other systems. You don't have to worry about clipping. It just handles it.' Someone is demonstrating the vast array of weapons on offer in *Body Harvest* – handguns, rifles, bazookas – when he gets run over from behind by one of the innocent villagers he's defending. The team bursts into laughter.

'It's been odd working with Nintendo,' says White. 'Psygnosis tended to let us get on with what we were doing and – dare I say it – didn't care so long as we got it out the door. But we'll send something off to Nintendo and they go over with a fine-toothed comb. We'll get notes like: "Mr Miyamoto has a couple of points about the gameplay."' The Greek level is climaxing now, as a spectacular sea monster made up of around 1000 polygons appears.

DMA's working relationship with Nintendo may be going smoothly, but playing with the biggest boys in videogames is not without its problems – some major, some minor. Nintendo instructed DMA to make the graphics in *Body Harvest* less European and the gameplay has changed seriously no less than four times – 'mostly at the behest of Nintendo,' admits White. But the DMA boys don't seem to view Nintendo as an ominous big brother, more a wise, if firm, father. 'We've had some cracking translation difficulties,' laughs John. Things like: "We'd like the graphics to be more materialistic." "What do you mean, more materialistic?" "More materialistic". "Uh... okay, then." So all we did was kept changing everything until they were completely happy.'

Like all the games in development at DMA, the impressive *Body Harvest* is a refreshingly unconventional title that doesn't exactly fit any standard generic template. 'Dave wants everything he does to be groundbreaking,' says Baglow with pride and, perhaps, a touch of weariness – evidence of the constant efforts to refine and reinvent the games in development here. 'There's always a lot of internal competition here to make the best game,' states **Keith Hamilton**, project leader on DMA's other near complete title, PC driving game *Grand Theft Auto*.

'*GTA* was a lot harder than we thought,' admits Keith. 'We're rewriting the handling of the cars at the moment. We've got the time as we're changing the graphics to 24bit.'

'The good thing about *GTA*,' chips in **Ian Johnson**, programmer on the game, 'is that you don't have to go down a predetermined path. And there's nothing as much fun as spinning a car over your friend's head six times.'



David Jones (above): 'If I had my way, I would only do PC and N64 titles. Those are the two platforms that interest me the most'

'WE'LL SEND SOMETHING OFF TO NINTENDO AND THEY GO OVER IT WITH A FINE-TOOTHED COMB. WE'LL GET NOTES BACK SAYING THINGS LIKE: "MR MIYAMOTO HAS A COUPLE OF POINTS ABOUT THE GAMEPLAY"'

John White, DMA Design

SILICON VALLEY

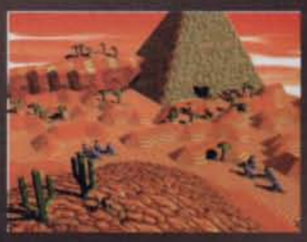
With a slight resemblance to *Mario 64* and an overall cutesy look and feel, *Silicon Valley* may well be DMA's attempt to follow traditional Nintendo game principles.

The storyline, though, has a complexity at odds with most Nintendo titles. Broadly speaking, the action takes place in a space station where robot evolution experiments have produced an assortment of vicious cyber-animals. These weird misshapen creatures (polar bears with tank treads, rabbits with helicopter ears, etc) have now taken over the craft and the player must come onboard to regain control.

According to the design team, the aim was to combine a platformer, a strategy game and a beat 'em up into one title. Thus the layout of each level is riddled with ramps and platforms for the player to leap across, and there are loads of evil mutants which you can get into scraps with.

As for the strategy part, each creature has a different skill which can be stolen after a successful fight. It is then necessary to find out how to use that skill in order to gain access to new areas of the space station.

Although far from complete, *Silicon Valley* has enough good ideas to make it a thoroughly enticing proposition. And the rabbits are great.





Cutesy graphics and a touch of platform gameplay mark *Silicon Valley* out as Nintendo fodder

GRAND THEFT AUTO

With videogame violence once again becoming a contentious issue in Britain, DMA could well face a rough (joy)ride when *GTA* is released next year.

Never has the phrase 'moral vacuum' fitted a game so well. Here, all the player has to do is steal cars and cause bloody havoc throughout three US cities. The point? To rise through the ranks of a mafioso crime syndicate.

Like *Body Harvest*, the action is mission-based: the crime boss hands out jobs (assassinate a certain person, steal a certain vehicle, etc) and players decide whether or not to follow orders.

Apart from that, gameplay is completely open. Players can drive wherever they like, crashing into other vehicles and running over innocent pedestrians. Eventually, the police turn up (in New York, players have to send quite a few bystanders to the morgue for this to happen), but they can also be squished for extra points.

The game is awash with features: 35 different vehicles to steal, 2500kms of road to explore, dozens of secrets to find, and a fourplayer LAN option. The only thing you don't get is the chance to be a cop. Apparently, the designers toyed with the idea but found it boring. 'We dropped it like a live grenade,' says Baglow. A highly appropriate phrase.







Steal vehicles and kill pedestrians: *Grand Theft Auto* is a moral worry bomb just waiting to go off

BODY HARVEST

The premise behind DMA's opening N64 title is more reminiscent of a sci-fi horror flick than a Nintendo title. The human race is nothing but food, planted on Earth by an alien race thousands of years ago. Now the cosmic farmers are back, arriving at different points in history to scoff what they've sown. By 2050 AD, when the game begins, there's hardly anyone left to devour.

What follows is part thirdperson shoot 'em up, part manic driving game and part combat strategy. The player, a futuristic freedom fighter, beams into several time zones, kills the aliens, destroys their power generators, and beams out. If too many humans get killed before the mission is over, the aliens send in a mutant to track down and terminate the player. From here on, survival is tough, to say the least.

Predictably, the visuals are just astounding. Alien beings vary from huge flying wasp creatures to robotic crustaceans, and all are highly complex and beautifully designed. Backgrounds too have an SGI-like level of clarity and lush smoothness. No wonder DMA chose to bypass 32bit technology.

And then there's the gameplay. One of the most interesting elements is the fact that you can get in and drive any vehicle you come across. Tanks, planes, fire engines and ice-cream vans litter the (totally explorable) landscape and they all have their own specialist uses. With the possible exception of the ice-cream van.

Body Harvest, then, looks quirky, intelligent and exciting. If it delivers what it promises, it should easily end all that 'only Nintendo can make N64 games' speculation. It also provides an interesting contrast to Miyamoto's brand of harmless, cutesy fun.



















Body Harvest **features myriad amazingly diverse alien creatures – many in the form of gigantic android insects. According to DMA, there is a strict hierarchy amongst the invaders, and learning their separate roles and behavioural patterns is an important part of the game. As is shooting them...**

The crowded unit which houses the *GTA* team feels something like a school hall. The high-ceilinged room is partitioned into noisy little work areas and is also home to DMA's other N64 title, *Silicon Valley*, and a quirky PC strategy game, *Tanktics*.

There's no sign here of any other systems, though. The absence of Saturn or PlayStation development is in marked contrast to the majority of UK developers and, like everything at DMA, stems from David Jones' personal vision of the market.

'If I had my way,' says Jones, 'I would only do PC and N64. If I was just doing it for fun. PC because I enjoy PC games more than any other format probably because I'm, y'know, 30 years old now. N64 is still great, it's great fun, but I like your more strategic-type games so I much prefer to sit down in front of a PC.'

Jones isn't a fan of multiformat publishing for the sake of it, probably a legacy of the years the company spent cranking out *Lemmings* conversions. 'It's very hard to explain to publishers that sometimes games just don't go across all formats well,' he offers. 'We are actually doing some games on Sony, where we feel the games will translate well, but that's not always the case with our games.' Some of DMA's staffers, no doubt spoiled by the N64, are more blunt about the other formats. 'I rate the PlayStation,' confides one, 'but the Saturn has had its day.'

Jones' interest

in the PC is behind the most recent changes at DMA Design – an alliance with Canadian shareware developer Epic Megagames. The reasoning behind the deal seems odd. Why would the successful, innovative DMA team up with Epic, a company whose track record is full of the sort of competent, unambitious genre clones that the Scots deliberately shy away from? The reason is *Unreal*, a still-unfinished *Quake*-alike created by Epic's **Tim Sweeney**. 'I'd seen some screenshots on the Web and was quite excited about it,' enthuses Jones. 'I pestered GT, saying, "I'm not leaving till you show me this game."'

Edge is now being shown this game, or rather a demo of the engine, by **Mark Rein**, VP of Epic Megagames. Rein is revealing the dynamic lighting effects of the *Unreal* engine. 'Oh, this is cool,' he gushes. 'We can create rooms where light reflects off water onto the walls or if you're in a courtyard, you can see where the moonlight falls. Neat, huh?'

As the demo continues, it's soon apparent that Rein starts every sentence with, 'Oh, this is really cool,' and finishes them all with a slightly smug, 'Neat, huh?' His brash manner is a bit of a jolt next to the self-effacing Scots of DMA, who seem happy to let their work speak for itself. But, in spite of Rein's hard sell, *Unreal*'s quality speaks for itself, too. Using the game's editor, he builds a hut with windows, doors, a floor and dynamic lighting in four minutes.

'Oh, by the way,' he grins, 'that'd take about an hour in the *Quake* editor. Neat, huh? And this is really cool…' He then makes a brush of the hut and duplicates it several times. 'Now you've got a town.' He proceeds to build a bridge between two of the huts and stairs leading to the bridge. 'That's the beauty of this tool. It's very easy to experiment. Very easy to get right.'

Epic's goal is to get *Unreal* running in 640x480 at 25fps on a P120 but even the 8bit-colour, 320x280 version looks good. 'We should run this on an MMX so you can see it in 24bit colour,' adds Rein.

The power and versatility of the *Unreal* engine are evident, even from this brief gameplay-less demo, and it makes the DMA/Epic deal seem a much more sensible proposition than it first appeared. 'It's not a business thing,' says Jones; 'It's more a thing to do with games. Epic is much stronger with the new technology on PC than we are but we're obviously much stronger on consoles. These guys have a technology they want to exploit but don't have the resources. We have a lot of resources, especially when we finish these games – we'll have plenty of people.'

It's getting late. Even in the dark, Dundee Technology Park still looks dull and ordinary. Thankfully, there's nothing ordinary about DMA Design. 'We've not done too badly in the past,' Jones says modestly. 'We've had a quiet period, we've games coming out now which I hope will do well.' **Edge**'s photographer asks for one last shot, of David posing next to the fluffy Lemming on a tricycle that everyone trips over in the foyer. It's the only sighting of a Lemming all day. 'Maybe sometime in the future, we'll visit it again,' he muses, 'but I want to take a big break from it.'

DMA has moved on but its roster of new titles has all the hallmarks of the experimentation and innovation that made *Lemmings* such a videogaming phenomenon. 'I think with the combined resources of Epic and DMA we'll be a major player in the games market,' offers Jones. 'But great games, that's what it's all about.' In *Body Harvest* and *Grand Theft Auto*, his team appears to have a couple more of them at the very least.

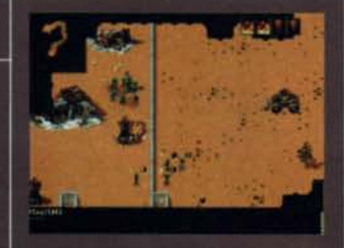
7TH LEGION

Command and Conquer seems to have replaced *Doom* as the PC game everybody wants to have clone. *7th Legion*, developed by Kiwi-based Vision Software and published by Epic, is the latest attempt.

Yes, this is essentially another futuristic action-strategy game which allows the player to guide whole armies into battle with opposing forces.

At least here the designers have tried to add a few new touches. Stealth weapons, infantry rank advancement and the ability to ride creatures into conflict all pop up, as do LAN, Internet and modem options.

Epic has created possibly the best *Doom* clone, so *7th Legion* may offer more than most *C&C* wannabes.





Like many other *C&C* clones, *7th Legion* offers crisp 640x480 hi-res graphics. The futuristic robot warriors are particularly impressive

TANKTICS

To accompany *7th Legion*, DMA has its own battle strategy game in development. *Tanktics* takes the basic *C&C* premise – player's armed forces vs computer's armed forces – and, characteristically for this company, subverts the genre into something much more unusual.

This is exactly how unusual: the player controls a hovering crane with a huge magnet attached to it via a long rope. In the middle of each map there is a pod spewing out tank parts (there are dozens of these maps, split into four diverse eras; stone age, medieval, present day and future). The player then uses the magnet to collect parts and put them together. The resulting tank then trundles off and into battle.

It is, of course, slightly more complicated than that. The type of tank you make varies depending on what parts you use, and there are loads of map features (acid lakes, molten lava, etc) which play a part as well.

The crisp, attractive graphics are actually rendered in real-time and the game apparently uses some visual tricks never before attempted on the PC. Heat haze and vapour trails from fire-based weapons certainly sound quite impressive.

Tanktics could well represent the next generation of battle strategy sims.







Although comparable to *C&C*, *Tanktics* represents an eccentric twist on the battle sim theme

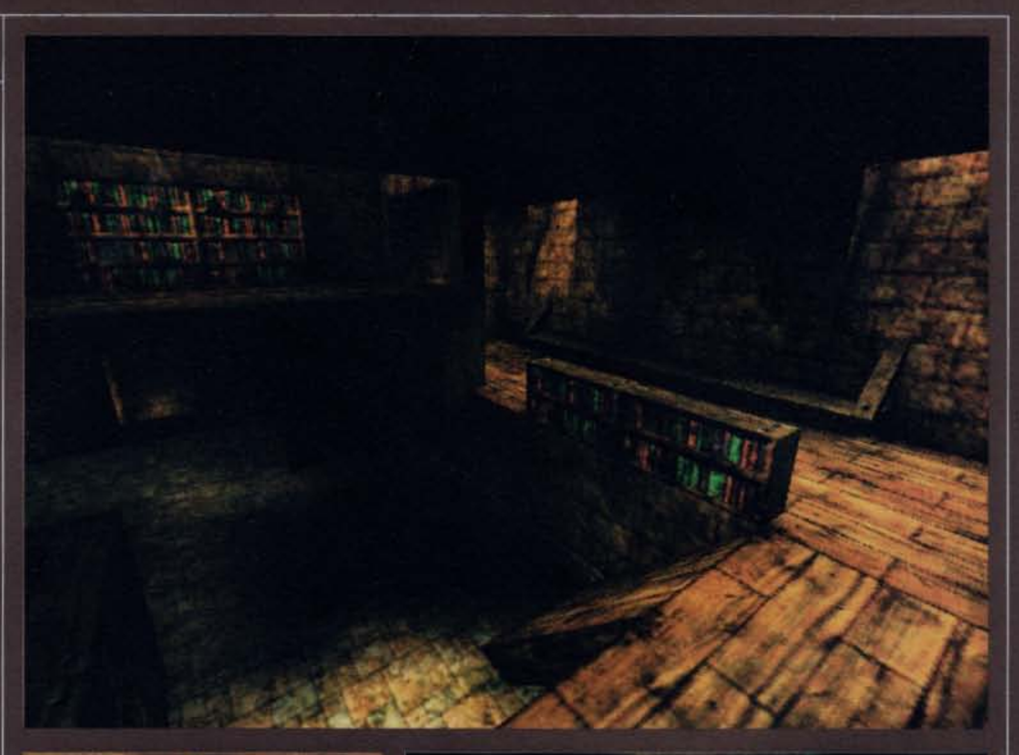
UNREAL

To date, id's *Quake* stands alone as a firstperson shoot 'em up, its intensity and visual finesse shrugging off allcomers. That may be about to change with *Unreal*, however. DMA will be porting Epic's impressive-looking game from PC to N64 following the formation of a 'strategic alliance' between the two companies, and Nintendo has already given the project the green light as a 64DD title.

In its current PC incarnation, *Unreal* looks breathtaking, with lusciously drawn locations and state-of-the-art lighting effects. Water reflects on ceilings, swinging lights fling muddy shadows over brick walls, and creatures cast real shadows which often appear snaking across the floor before the creature itself is visible. With all the hallmarks of a truly groundbreaking 3D engine, *Unreal* is, incredibly, mostly the work of one programmer, Epic's Tim Sweeney.

Importantly, Sweeney appears to have used all the technology he could get his hands on to optimise *Unreal* visually while leaving its speed uncompromised. For example, the game is specifically designed to take advantage of DirectX, meaning that graphical effects like bilinear filtering are possible with little impact on frame rate. The game also features a number of special enhancements for Intel's new MMX technology, but don't expect to see obsessive 3D graphics card support. According to Mark Rein, *Unreal* can do things in software that current 3D cards can't even deal with.

The real question mark, though, hangs over gameplay. *Quake*'s gameplay was vintage id: brash, addictive and absorbing. *Unreal* will have to do more than live up to its name to compete successfully.







Unreal **premieres one of the most advanced 3D engines ever seen on the PC. On a P133, in 640x480, the game runs at an impressive 25fps. And that's without a 3D accelerator. The game's editor (above right) is so easy to use, Mark Rein was able to create a whole 3D town in less than ten minutes**

INTERVIEW WITH DAVID JONES

He may hail from what most Britons would regard as the back of beyond, but David Jones is truly a world-class figure in the videogames industry. He is, after all, the man who gave us *Lemmings*. He's also a relaxed and affable man, although now he seems a bit uncomfortable. 'I don't like this room much,' he says of the DMA boardroom. 'It's too corporate...'

Edge: Why do you think Nintendo chose to approach DMA Design?

David Jones: I'd always sort of kept in touch with them over about a year and a half because initially we did some video compression on the Super NES, just in case they were doing a CD-ROM drive. When they saw that, they quite liked it and I think they just made a habit of visiting us. They seemed to like what we were doing with games.

Edge: It seems like there's something else, though. Your games do have a certain adventurous, childlike quality about them, much like Shigeru Miyamoto's games, where you can try different things out.

DJ: Yeah, possibly. We've never really done a run-of-the-mill game, it's never really been our forte. We've always been quite risky in the game styles we try and work on. I think they maybe like that.

Edge: And how has DMA Design's relationship with Nintendo gone?

DJ: It's fine. It's hard. It's a very hard relationship because A – their quality is so high, it's so hard to match the quality of the products they do. And B – they really like you to try and focus on making Nintendo products. It's very hard to write games that you're not writing for yourself, which is traditionally what I've done. I write a game because I want to play it. It's a big, big difference when you try and write a game for somebody else. It's really, really hard to do. So, it has its problems.

Edge: How does the relationship work in practical terms, on a day-to-day basis?

DJ: They pretty much let us get on with it. They send us evaluations, they come up with a quite lot of changes every time we send them something. They say to us, "If you want to succeed in the Japanese market, we suggest you do A, B, C, D, E...", y'know, so we go and do that. And basically, we just have to listen to them because we're not as good as they are. Nobody in the world is as good as they are, so we'd be daft to try and say "We think you're wrong". So we just have to work with them and we implement everything that they ask for.



'We've never really done a run-of-the mill game. We've always been quite risky in the game styles we try and work on. I think Nintendo likes that'

Edge: How do you see the Nintendo 64 taking off?

DJ: Oh, I think it'll be massive. I mean, just look at the first three titles. They're such fun. They're way above anything else that's out there. I know there's concern about the price of the games, maybe the disc drive will fix that, but I think it's just a brilliant machine. It's got a great controller – when I first started talking to Nintendo, one of the things I was really pushing for was to make the machine's controller different.

Nobody else had done that, they'd just stuck with the same old up, down, left, right and a few fire buttons. And I was pretty adamant on that because one of the reasons *Lemmings* didn't translate particularly well to consoles was because you couldn't play it with a joypad. You needed a mouse or some sort of analogue input. So the analogue stick in itself gives N64 a huge advantage. And the hardware is really powerful, things just look great on it.

Edge: You don't think it'll have any trouble because it's coming to the market a year and a half, two years later than PlayStation and Saturn?

DJ: No, not with the quality of games they're doing just now. The pricing's already proved aggressive – $200 in the US, that'll come down and down. I think with great games, it's like what happened with the Amiga, that came later, the Super NES came later, it didn't stop them dominating. They were better machines, the software was nicer. It's gonna be big.

Edge: The PC is your other big format. What do you think of the 3D cards available? Will they beat the consoles at their own game?

DJ: I think they're great. They may not keep up with the software, that's the only downside, but I think eventually hardware will be the way to go. Look at the PC. It would have needed a Pentium processor running at something like 400Mhz to match the N64. I'm a little disappointed that some of them do not have that sort of power – if Nintendo can do it for $200 a machine then surely someone can make a card that can do it as well. As long as it's pretty transparent to the user, as PCs are a bit of a nightmare to get games running on, and they keep coming up with hotter and hotter chipsets then I think they're going to be a success.

Edge: What about your two new PC games, *Grand Theft Auto* and *Tanktics*? What do you feel you've achieved with them?

DJ: I think that they're two very, very different games. We're a bit concerned about *GTA* in the US because of the overhead nature of it. The US is much more into 3D, everything has to be in 3D and we're a bit disappointed by that because we know it plays great and is a fun game. Games like *Micro Machines*, I mean, they're so much fun, and I feel actually sorry for them if they dismiss it out of hand. I don't think we'll have any problems with Europe but we are a little worried about how the US will take to the game.

Tanktics, once again, it's quite a bit different and that in itself will make people take a look at the game and say, "At least, somebody's doing something different now." It is a bit of a new slant on strategy-type games, so we're fairly sure we'll do pretty well with that one too.

Edge: Given the air of moral righteousness which is happily sweeping across Britain at the moment, are

you anticipating any sort of public outrage at the violence in *GTA*?

DJ: Probably, but then we actually made television in the deep south of America with *Lemmings*. We were told we were inciting devil worship. For one, they referred to Psygnosis because of their logo – they had this sort of Satanistic logo – and secondly, we had this level called '666', where you had three sixes on the screen. And there was a pig's head with flames coming out, which they said was symbolic of the devil as well. It made television for inciting children to worship the devil. It doesn't matter what you do there will always be somebody out there who gets offended.

GTA... [laughs heartily] might offend a few more people than *Lemmings* did but it's no worse than most films, really. It happens all the time on films, you watch it on TV all the time, it's pretty cartoony, it's done with humour, so we'll see how it goes.

Edge: All four games you've shown (*Body Harvest*, *Silicon Valley*, *Tanktics* and *Grand Theft Auto*) seem to offer a great amount of freedom to the player. Is that important to you?

DJ: Oh yes. I hate linear gameplay. To me, the ultimate game is to take real-world physics, model it perfectly, give them an open environment, let them go, then just play around with the laws of physics. That's what games are. I just love games that are pretty open-ended; you can try things, you can go wherever you want. Going back to *Lemmings* there were many, many ways to solve the puzzles... I just hate games where it's A-B-C. We always try and do that, try and make them as open-ended as possible.

Edge: Also, the games you have in development at the moment are very brave, in that they're not sticking to any standard genre. That's a definite part of the company philosophy, isn't it?

DJ: Yeah. We have a little formula every time someone here has an idea for a game and one of the first questions is "What's different about it?". There are so many games out there now. We could probably be a very good company if we were to do driving games. I think we'd be an extremely well known company and we could probably do them in half the time we're doing games. But it's not what we're about.

We're taking risks, really, we put a lot into these products. We'll see how the market reacts but I think people like games that are different. Even if they're not perfect, I think just the fact that they're different... people really respect that, so that's what we're hoping for.

Edge: And you're still independent; your games are published by BMG Interactive and GT Interactive. Is that important to you?

DJ: I haven't really thought about it that much, to be honest. It doesn't matter if we were owned by somebody or if we were as we are, we'd still just write games.

Edge: So you're not afraid of the sort of 'golden shackles' that some other developers have been trying hard to shake off recently?

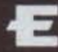
DJ: Obviously, I have been reading about a few people who do feel that they made the wrong decision. That surprises me, y'know, because I would have thought that any company that invests a lot of money in a small company would let it alone, let it get on with what it was doing because that's why they invested in them. It's hard to tell unless you're there and know the exact story.

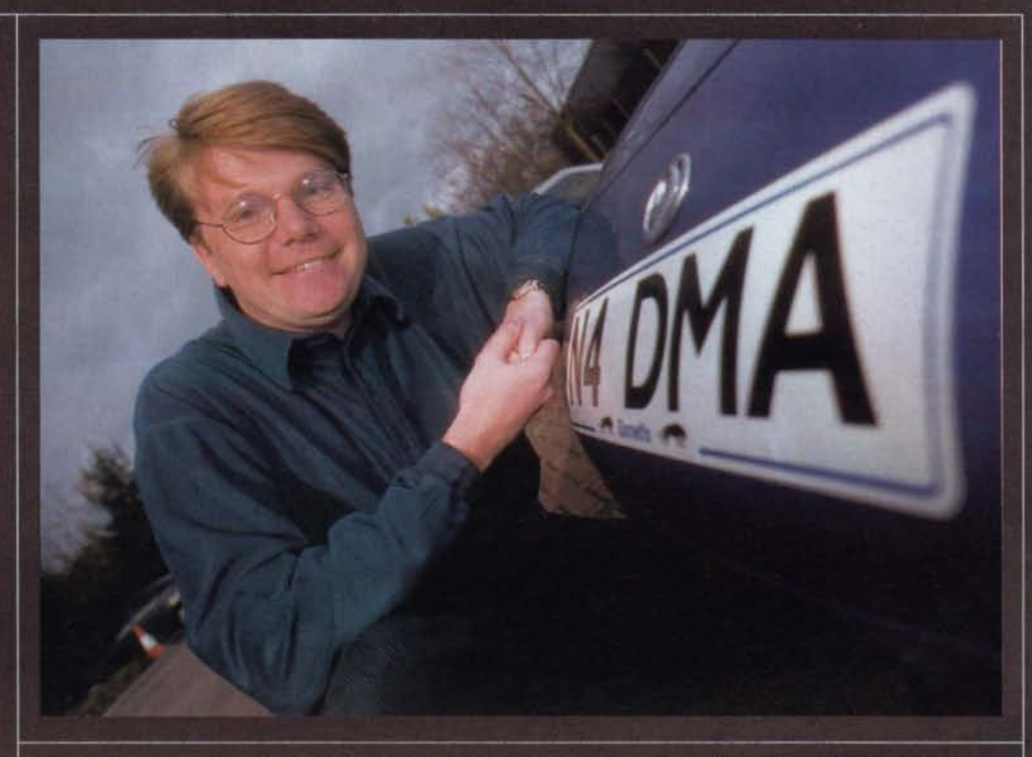
It must be pretty enticing if someone comes along and says, 'We'll take all your financial worries away. You just concentrate on the games.' It must sound great to them. But there seems to be a problem with a lot of the ones that have gone that way. It's strange; it's a shame.

Edge: Someone around DMA said earlier that you're a great optimist. So you must be enthusiastic about the future of videogames?

DJ: Oh yeah, games will always be here. Obviously, there are quiet times in the business like anything else but they're not going to go away. As long as you don't try to second-guess what system's going to be the winner and concentrate on doing good games. Don't ask me a question about who's going to win the platform wars or where the business is going to be in three years, all that sort of rubbish, because nobody knows and it doesn't matter. If you do good games they'll always sell well.

What I like is that people are not daft any more, they really look at games deeply now before they buy them. I think that's what's caused people problems. There was a time when you could sell anything in this business. Anything. That was more disappointing – when the business was bigger it was because of that. Times are hard now, making people focus more on quality and innovation which is great.

I'm not bothered. It's the people writing bad games who are bothered. 



'Don't ask me questions about who's going to win the platform wars or where the business is going to be in three years, all that sort of rubbish, because it doesn't matter. If you do good games, they'll always sell well'



A year ago television was crammed with shows dedicated to videogames. Now, only one remains. Has the bubble well and truly burst, or is it a case of marketing the right product to the wrong people? Edge investigates the complex world of television programming and uncovers a hotbed of prejudice, misunderstanding and plain old ignorance. The question, it seems, is not how did these programmes fail, but how did they get on TV in the first place?



Following the failure of weekly games magazines in the late '80s, television found a unique role in the computer industry. The medium's ability to cover news, events, and the audio-visual appeal of big-budget games was far in advance of most computer magazines and had a greater impact on the general public. Indeed, it can be argued that programmes like Channel 4's GamesMaster not only fed off the computer boom but also contributed to it, creating a new generation of TV icons, some of whom have gone onto arguably greater things (see 'Game Gurus').

However, television is a complex platform: the stakes are high and the margin for error slight. Programmes have to build audiences, attract advertisers and fit into a scheduling strategy in which far bigger projects are made or broken. When ITV's experimental interactive show T.I.G.S failed to succeed it took Bad Influence — their flagship product — with it. Neither camp felt they had been given a fair chance to succeed.

Still, in 1995 things had never looked better. GamesMaster was riding high, Bad



Influence and Games World apparently doing well, and Reactive, T.I.G.S, Total Reality and Technophobe's Guide to the Universe all on the way. What could possibly go wrong? By March of this year the answer was clear:



everything. Four shows were axed within the space of a couple of months and producers were jumping off the bandwagon with uncharacteristic openness. 'Let's be honest, it didn't hit the mark,' says **Eric Rowan**, executive producer of BBC's Total Reality. 'We weren't really sure who our audience was, we were under a lot of pressure to increase ratings right across the board, and we couldn't get enough girls to watch.'

And Rowan was not alone in this feeling off uncertainty about the target audience — a spokeswoman for ITV told **Edge**, 'T.I.G.S was a brave experiment which didn't work. It was difficult to make it attractive to kids at home who were not interested in participating.'

Such comments reveal the pressures programme makers were under to inject new pace into the computer revolution. Advertisers demanded more girls (an audience computers have always failed to reach), schedulers wanted to steal viewers from rivals, channel bosses needed to ensure their 4:30pm audience stayed watching right through till 5:30pm. Consequently, programmes became more experimental, adding touches of gameshow or light entertainment in the manner which is currently working so well for cookery. Unfortunately, the new recipe failed to tickle gamers' tastebuds in the same way.

Part of the problem was that programmers were not keeping in touch with how the videogame scene was developing. While new shows were being put together with kids in mind, the computer industry was subtly changing. PlayStation owners in their late teens and PC owners in their 20s were replacing the far younger SNES and Mega Drive owners. The audience was getting older.

In effect, then, choosing to aim new programming at a children's audience was unlikely to succeed from the start. However, some argued the whole subject was wearing pretty thin, anyway. 'By the time series one of Games World appeared we knew the whole trend had peaked,' comments **Jane Hewland**, producer of Games World and GamesMaster, 'but who am I to say to Sky "Don't give me lots of money"?'

TV Game Icons 1 – Dominik Diamond

Dominik Diamond is videogame TV's first star, commanding big appearance fees and imposing an abrasive personality (inherited from a brief stint as a stand-up comic) on everything he touches. So far he is certainly the most prolific of the TV game icons, hosting everything from Radio 4's Pick of the Week to BBC2's recent Technophobe's Guide to the Future. He has also found time to write for a number of magazines, and is currently working on a novel.

Diamond's link with GamesMaster is virtually unbreakable and the effort to replace him with Dexter Fletcher in series three was a disturbing eye-opener for all concerned. Fletcher's ill-ease as a presenter together with his obvious lack of interest in the subject made Diamond's approach all the more missed. So what happens when he leaves for good? As the show's producer put it, 'Dominik is GamesMaster. I can't imagine the show without him.'

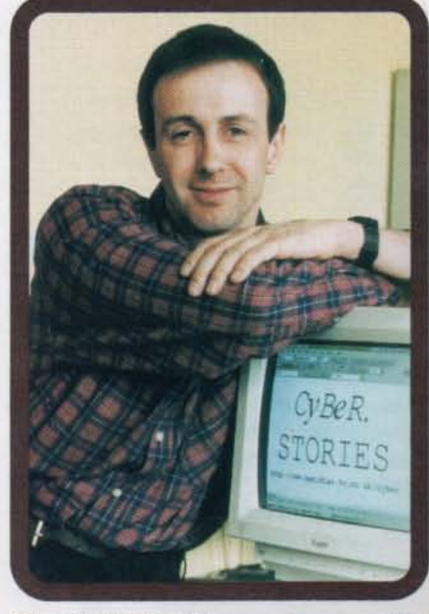








One of the reasons GamesMaster has survived is its 6:00pm scheduling, which has allowed the show to present videogames in a more laddish format. Hence a variety of 'comedy' guest stars, like Michael Fish (left) and 'babes' like ex-page 3 girl Samantha Fox (centre) and Zoe Ball (right)







A brief history of computers on the box

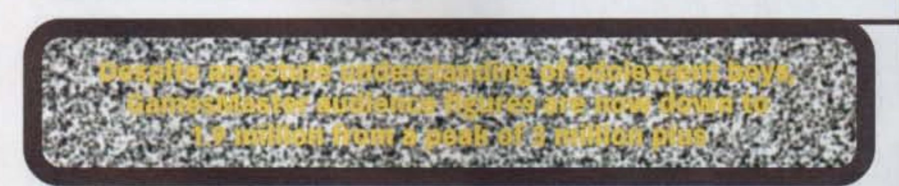
1982 – The Computer Programme (BBC2)
1983 – Making the Most of the Micro (BBC2)
1983 – Micro Live (BBC1)
1985 – Micronet (BBC1)
1992 – GamesMaster (Channel 4)
1992 – Bad Influence (ITV)
1993 – Games World (Sky1)
1994 – The Net (BBC2)
1995 – Reactive (BBC1), T.I.G.S (ITV), Total Reality (BBC1), Technophobe's Guide to the Universe (BBC2)
1996 – Cyber.Cafe (ITV), Scoop (C4)

Although dedicated videogame shows are out of favour at the moment, programme makers have not entirely given up on technology. Cyber.Cafe (above), for example, is ITV's attempt to bring the information superhighway to the wider public. But do they really want it?

◀ In addition, schedulers were trying to sandwich programmes together to sell more advertising — a concept which works well for films, sport and lifestyle programming, but not so well, it seems, for videogame shows. Some argue that putting Bad Influence directly after T.I.G.S on Wednesday afternoons actually exposed divisions in the market, creating an advertising graveyard as viewers bailed out to BBC's strong afternoon line-up (none of which featured computers). Yet **Patrick Titley**, BI's producer and creator, remains sanguine about what went wrong 'Making programmes is an ancillary part of our main business, which is selling people to advertisers — it's a cruel reality but one you accept before you start.'

Indeed, Titley lost more than most. Here was someone who had been largely responsible for both the '80s phenomenon that was Micro Live, and Bad Influence, the first computer programme to be unashamedly aimed at children. He was already looking to repackage the BI format for an older audience when it was axed in the middle of series five. By then, however, computers were tainted with 'Mike Yarwood syndrome' — the mere mention of them created an atmosphere of resistance and doubt. 'It's always been difficult to get anything about computers on television,' Titley recalls. 'Commissioners think they're boring and, when a slump occurs, it reinforces those prejudices. In five years time there'll be another peak, and I'll be there with my programme — if I'm not too old by then.'

It's hard to see that far into the future for computers on television, but there is much to be learned from the one survivor of this year's computer crash. Jane Hewland started at LWT, where she first had the idea for GamesMaster before placing it with C4. Series six began in November, and is set in Atlantis — just one of the many changes in the show's history, including the disastrous attempt to swap Dominik Diamond for Dexter Fletcher in series three. 'You have to change,' says Hewland, now MD of Hewland International. 'People are dropping in and out of this audience all the time, and while the original show was just about videogames it's now more of a general entertainment format.'



GamesMaster was also blessed with a 6pm slot which could be aimed at older and more adventurous viewers. As the average age of console owners increased, it moved ever closer to Hewland's ideal editorial mix. Unashamedly laddish, with girls flaunting their assets for teenagers overflowing with unused hormones, GamesMaster knows its market and knows how to keep it amused.

Despite an astute understanding of adolescent boys, GM audience figures are now down to 1.9 million (from a peak of 3 million and over). This would panic ITV or BBC into drastic action, but provides an adequate early-evening audience for Channel 4.

Aiming at a more 'mature' audience may also account for the survival of BBC2's info superhighway programme, The Net, which begins a third series shortly. Essentially the rule is, older viewers are a lot more reliable.



Success for Hewland — and any other producer interested in computers — now relies on multiformat programming with a hi-tech gloss. Scoop, a mixture of pop, technology and news hosted by Dominik Diamond, is due to start this Autumn. Many will be watching its progress carefully for signs of a revival of interest — either in the subject of videogames or in the show's mixed format.

It certainly seems as though videogames can only be successfully covered on television if they're looked at alongside other subjects. Electric Circus, for example, deals with games and films, and remains a popular element of BBC1's Saturday morning show, Live and Kicking. Similarly, ITV's Movies, Games and Videos is a perennial weekend favourite.

Which leaves a question: is there a future for dedicated computer programming on TV? The short term answer is no — certainly as far as children's departments are concerned. Additionally, youth commissioners will take a lot of persuasion to abandon their early evening fare of 'cult' '50s reruns. The main problem is the continuing reluctance of girls to watch anything connected with computers.

As Rowan puts it, 'If half the audience is alienated, there's very little point in us going on.'



Which is not to say there are no opportunities available. Top Gear has demonstrated how an unashamedly boyish subject can be taken and given mainstream appeal. Indeed, the aspirational qualities of cars are not entirely dissimilar to those of computers. All it needs is a little imagination, something even independent producers find hard to sell to the big four broadcasters.

However, the rewards for the first one to crack this particular problem are excellent. As indie producer **Mike Archer** puts it, 'You first have to accept your core market, limitations and all — in this instance 20-something males with disposal income. Then add elements which appeal to their other interests. The person who can create a programme like Fantasy League Football for computers will make a lot of money. It's a perfect niche market waiting to be filled.'

Other producers see the problem differently — to them the enemy is technology itself, a subject which confuses a general public still wrestling with the complexities of the video cassette recorder.

Perhaps recognising the technofear of the viewer is the answer: as Rowan says, 'We need to use technology in ways that don't tell you what the technology does.' On the other hand, actually addressing the uncertainties of the viewer — with edutainment shows like The Technophobes Guide to the Universe and ITV's four-part documentary, Cyber Space — may be the way ahead.

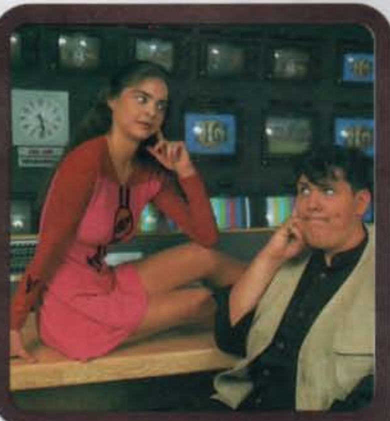
However, **Martin Day**, producer of T.I.G.S, thinks the entire subject might have been over-exposed already. He offers a grim prognosis: 'Perhaps computers will go the way of CB radio, as far as subject matter for programmes is concerned — it's not out of the question.'



As always, the public must wait for commissioning politics to allow someone to take a risk. GamesMaster's continuing success began with a leap of faith, an assumption that narrowcasting was an easier route to audience loyalty than mainstream programming. It is highly unlikely another similarly successful formula will be discovered without equal bravery.

But why wait for someone else to do the job? Prospective videogame programme makers should perhaps send their own suggestions to Marcus Plantain, Michael Jackson or Alan Yentob. Just don't expect a quick reply. ■





Shows which *use* computer technology, like the cartoon adventure series ReBoot (top), may well replace shows *about* computer technology such as T.I.G.S (above), which was taken off the air early last year

TV Game Icons 2 – Violet Berlin



Children's television has produced few role models more deserving than Violet Berlin. Cute, compact and pugnacious, she paved the way for Zoe Ball and Gayle Porter as someone any 14-year-old boy would be proud to introduce to his mates. Violet started off at TV-am, moved to BSkyB, and then BBC's Wildbunch. Her breakthrough was Bad Influence, where she quickly carved her way through presenting, reporting and finally producing her own segments. In fact, it is arguable that her change of role in series four (Sonia Saul took the co-pilot's chair) was one of the reasons for the wavering loyalty of the audience. She is currently pitching ideas left, right and centre through her own company, Curious Productions, writing for Digitiser and a number of magazines and newspapers, and appearing on anything that needs her presence to lend it credibility in the eyes of a fickle young audience.





Do it yourself

Sony plans to reintroduce the pioneering 'good old days' that lets users make their own games.





On February 28, 1997, Sony will introduce a new product into the UK market called Net Yaroze. Costing £550, the package will contain a unique black PlayStation, a serial cable for connecting the system to a PC or Macintosh, a CD filled with PlayStation programming libraries, a *C* compiler and debugger, example code, and other development tools. For the first time ever, consumers will be able to legally program their own games for a console system.

Over the next 10 pages, **Edge** presents the first English-language, in-depth report on the system: what it is, how it will work, and what it means for gamers and the industry as a whole. There are also tips on game design from Shiny Entertainment's Dave Perry and thoughts about the implications of the system from two of the UK videogaming scene's longest-serving programmers, David Braben and Jon Ritman, both of whom began their careers working in the 'back bedroom'-style development environment that Sony's new project is intended to nurse back to health.

Yaroze (as opposed to 'Yarouze', which was the original name of the system in Japan) – a Japanese word that roughly translates as 'Let's create!' – is one of the most significant developments in the home videogames industry for years. Conceived by PlayStation creator Ken Kutaragi, the Yaroze set-up includes software for the PC (or Mac), hardware in the form of a specially modified black PlayStation, and membership of a development club that takes the form of a private website.

The CD that comes with Yaroze contains a *C* compiler, a debugger, tools for converting graphic and sound files to PlayStation format, and the PlayStation development *C* libraries – the same libraries that many developers claim make developing for PlayStation so much easier than for Saturn, Nintendo 64 or even PC.

The system is not quite as robust as the professional-level PlayStation development kit. Any software created for Yaroze must fit entirely in the PlayStation's 3.5Mb of RAM (2Mb main RAM, 1Mb VRAM, and 512K sound RAM), so libraries for things like streaming video or data from CD are not included. This limitation is not quite as significant a handicap as it may at first appear, however – Namco's *Ridge Racer* conversion fits entirely within system RAM and could theoretically be created using Yaroze (minus the CD-streamed soundtrack, of course).

The website will provide a place for Yaroze owners – although 'members' is a more appropriate term – to get advice from Sony technical support staff, upload and download software, and talk to each other about development issues. The website currently serving the Japanese Yaroze program also sponsors members' homepages, and it's possible that the European equivalent will too, though this factor is not yet certain.

To fully understand the potential significance of Yaroze, some history must be considered. The videogame and computer game industry is huge – the latest figures indicate that over $5 billion of hardware and software will be sold in the United States alone this year. Increasingly, though, it's developing into an industry dominated by a small number of massive corporations. Things weren't always this way.

Fifteen or 20 years ago, sure, console owners' options were dictated solely by one or two companies. With the advent of personal computers such as the Sinclair ZX Spectrum and Commodore 64, things were much different.

During the Spectrum's early years, the prepackaged software industry was a primitive affair. Often users could reasonably expect merely a low-quality cassette accompanied by a photocopied cassette inlay containing instructions. The person putting the package together was very often the ▶

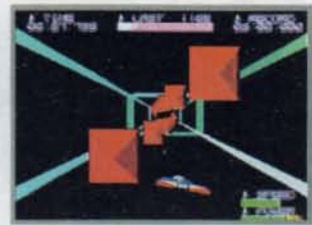
spirit of game development's with a £550 PlayStation development system An exclusive Edge report











These Japanese games created using the Yaroze program are very impressive for first-generation titles. Sure, they're mostly 3D shooters (always a shareware favourite), with the odd puzzler thrown in for good measure, but in light of the many comparable efforts for the PC, they look great

same person who designed and wrote the program and had also been responsible for its artistic and aural content.

It was an exciting time for home-computer users, feeling that they were participating in something new and different. The truth was often less romantic, however – many of these games were simply dreadful (a very large quality-control department generally doesn't exist in a one-person shop). But it was rarely predictable.

With no established genres or gaming paradigms, a £5 purchase was as likely to contain a shooting game as it was a text-based affair where the player controlled truffle-sniffing pigs. And if users didn't like a game, it often wasn't too much of a stretch to either modify its code themselves, or rewrite it in a style more to their liking.

As the industry grew and matured, computers became popular with people more interested in simply using them than programming them. Companies which started in bedrooms as hobbies, producing software for other hobbyists, developed and began producing software for non-hobbyists.

Those firms established quality-assurance departments, conducted focus group tests, and began to give gamers exactly what they wanted. There were some downsides to this (largely inevitable) process. As games grew in size and complexity, releasing them became a larger financial risk (a game that takes a year to create costs a hell of a lot more to develop than a hack cranked out in a weekend). To ensure a good return on investment, most games released fell into one of a few specialised genres, and innovation began to slow. Still, many hit games, like Peter Molyneux's *Populous*, remained the product of one person or of very small teams.

The advent of

multimedia-equipped PCs, much later in the evolution of the home computer, radically changed consumers' expectations of what a computer game should be, graphically. Immediately, aspirations shot through the roof, with games such as *The 7th Guest* and *Myst* showing a level of graphical quality that required a markedly different approach to development. Although a dedicated amateur might have a shareware hit, producing anything approaching commercial quality suddenly required far more money and time than most hobbyists had access to. This has only exacerbated the problem of lack of innovation. Id's *Doom*, released just before the 'CD-ROM revolution', was perhaps the last title to be successfully produced 'in the garage'.

'Since CD-ROMs came in, the audience has demanded so much that you can't really innovate,' says **Jordan Mechner**, creator of the classic *Karateka* and *Prince of Persia* titles. 'To have a bright idea and follow it through to the point where it is a saleable proposition, you now need millions of dollars and a team of trained professionals.' And, understandably, companies are reluctant to invest this sort of cash on anything but sure things, in well-known genres. 'The game industry has been paralysed – it's really hard to be creative,' Mechner laments.

Say what you want about how the old classics aren't what they're remembered to be; at least their designers weren't afraid to try new things. Today, with the majority of videogames and computer games rigidly locked into a restricted number of genres, innovation in gameplay has largely been replaced by mere technological advances. Certainly advances in technology can take gameplay forward into a new dimension (*WaveRace 64* and *Tomb Raider* would not have been possible two years ago), but it could be argued that *Quake* is not much more than *Doom* would have been if 166MHz Pentiums had existed in 1993.

With the majority of videogames locked into a restricted number of genres, innovation in gameplay has been replaced by mere technological advance

If the games industry is to avoid sliding into the same rut as TV has throughout much of the world, with any innovation or experimentation crushed by market pressures, it needs some kind of jumpstart, a way of bringing new designers into the mainstream who are not marginalised into the shareware ghetto or stuck as junior programmers on the latest *Doom* clone. Yaroze may very well be that jumpstart.

'This is one of the best things that's happened in a very long time,' says







No, it's not an attempt at a PlayStation version of *Breakout* (left) but a shot from the Yaroze startup screen. More shots of nearly complete Yaroze-developed games (middle and right). The Japanese Yaroze site on the World Wide Web is also home to many PlayStation demos and hacks

programming evangelist and *Earthworm Jim* creator **David Perry** of Shiny Entertainment. 'Creating a videogame requires passion, and passion is something that a lot of people have – but a lot of people with passion can't get anywhere near a development system and get through the rules and regulations of making a game.'

Industry veteran **Eugene Jarvis**, creator of *Defender*, *Robotron* and *Cruis'n USA*, is equally enthusiastic. 'It'll be wild. Imagine linking up all these lone-wolf designers over the Net to create a huge mega-project – if you can get any lone wolves to agree on anything. This is an awesome development.'

No doubt. By enabling enthusiasts to create their own games, Sony has dramatically lowered the entry barriers for would-be developers. It has also created an environment in which new ideas, unrestrained by market pressures, can be tried and tested, the best of which may advance the state of the art in the industry.

'Reducing the cost of entry into the industry will bring people into it,' says **Mark Cerny**, president of development at Universal. 'The whole reason *Disruptor* exists is because an enthusiastic hobbyist could start development on 3DO, since it had cheap development hardware. We saw the prototype running on 3DO and agreed to fund development on PlayStation. What we'll see primarily is hobbyists creating purely passion-driven games with no consideration for commercial success. I think we'll see some great games we wouldn't have seen otherwise.'

Despite enthusiasm

from the development community, sceptics may ask some questions about the true importance of Yaroze. Doesn't the possibility for independent enthusiast development already exist on the PC? Other than *Doom*, what has the shareware world brought us, except for myriad lame shooters? Why should it be any different on PlayStation? In short, what's the big deal?

The answer to this question reveals, in large measure, just what is so exciting about the initiative as a whole, especially considering that most Yaroze members will have already tried their hands at game coding on the PC or Macintosh.

For a start, this is the first time that anyone will be able to develop for a console system without a large cash outlay, and that will give enthusiasts easy access to a single standard hardware platform. Instead of attempting to develop for a lowest common denominator of hardware (or worse, a *Windows* API), people will be able to concentrate on exploiting the PlayStation hardware as fully as possible.

The program libraries will enable people to get up to speed in complex 3D development far faster than they would be able to on a PC. The libraries will also aid novice developers whose own 3D skills might be sub-par at first.

Also significant is the level of support from Sony and fellow Yaroze members that will be available through the website. For the first time, hobbyist game developers will have somewhere official to go to get information on issues. It is also expected that the website will, as in Japan, become a repository for source code that will enable people to learn faster just how to program the system.

According to

Will Botti of Black Ops, 'In a lot of ways, the PlayStation's success is directly related to the calibre of Sony's 'teachers' – the staff at SCEI and SCEA – and their 'teaching materials' – PlayStation development kits and artist/sound tools.' With Sony extending this level of support to novices, software produced for Yaroze may well outstrip the quality of comparable PC software.



Well, it may not turn out be a classic, but this embryonic 3D shoot 'em up shows just what can be achieved by amateurs using Yaroze



Some hardcore gamers may pick up the Yaroze system simply to play other people's games rather than to create their own

The 3.5Mb limit may not even be a considerably limiting factor – before the advent of CD-based systems, 3.5Mb was considered a significant slice of storage space. 'By limiting it to 2Mb [main system RAM],' says Jarvis, 'the focus needs to be on gameplay, not graphics.'

Most importantly,

though, the PlayStation provides a new horizon for enthusiast-level programmers to head towards; a new world to conquer, exploit, and make their own, which is where most of the fun of programming, particularly at the hobbyist level, comes from.

Of course, the biggest benefit of the crossover between PC and Yaroze enthusiast developers will not be for them, but rather from them. For the first time, we will see innovative, hobbyist-level development on console. Game ideas that would never fly as commercial titles, but which may work far better on console than PC, can now be crafted and enjoyed by other Yaroze owners.

Another exciting aspect of the system is that, unlike commercial PlayStation software, no approval process exists – anything goes. If hobbyists want to do a 32bit update of seminal trading game *Lemonade Stand*, they can go for it. 'This is totally against the conventional wisdom that product must be controlled,' says Jarvis. 'It's neat to give access to anyone to do anything.'

Don't expect the system to sell solely to programmers, either. In Japan, a large number of artists and designers have also purchased Yaroze, looking to team up with programmers to create games. **Edge** also expects some hardcore gamers to get Yaroze simply to play the games that others have created – as well as Japanese and European games (the Yaroze PlayStation has no territorial lockout).

The Yaroze system opens up a new range of possibilities for users, and has the potential to greatly invigorate the software industry as a whole.

So what does

Sony get out of it? 'If Yaroze were to be judged on marketability alone, I would say it's going to be a big flop,' says Botti. 'Kids want to play games, not program them. I don't see Yaroze as a big profit centre. But if we look deeper, we can see the reasoning behind Ken Kutaragi and Terry Tokunaka's plans. In the same way that the extensive developer support helped endear top game designers to the platform, I see Yaroze as a way to endear the younger generation of hackers/game enthusiasts to Sony's methodology: "Code in C, use our tools, don't reinvent the wheel, focus on games not the friggin' video drivers, and so on."'

In short, Yaroze will let enthusiasts concentrate on creating games, instead of being bogged down in the minutiae of programming for an OS like *Windows* that must also be able to run printer drivers and screensavers.

Ultimately, Yaroze may not change the world. But it could be someone who gets their start on Yaroze that does. And that's why it's so important.

Out-of-box experience

So what do you get in the Yaroze box? Here's the official rundown of all the bits and pieces, plus all the optional extras users will want to make full use of the system

Yaroze comes with everything needed to make software for the PlayStation (assuming users already have access to a PC or Mac, obviously). The Yaroze system itself is almost identical to a standard PlayStation, except that it comes with different boot ROMs, the lack of a territorial lockout, and a radically different encryption scheme. (And, of course, it's black.) It differs from a professional-level development system in that it has less RAM (just the standard 2Mb main memory that comes with every PlayStation, and no extra RAM for debugging), no CD-ROM emulator, and it doesn't come on a PC board.

The Yaroze package will include a PC CD-ROM as well as a key disc for the PlayStation and manuals. These are reference guides for the libraries and some PlayStation-specific information, but if you're not a programmer now, don't get your hopes up – they're certainly not going to teach you C. Assuming that you already program, though, you'll find them a well laid-out guide to getting started with Yaroze development. On the PC CD-ROM there are C language tools, libraries and code examples.

The standard tools supplied with Yaroze include the GNU Tool Chain, a Compiler Assembler, Linker and a GDB debugger. These are all 'pretty direct ports of the existing Free Software Foundation tools' according to **Bill Rehbock**, vice-president of research and development at Sony Computer Entertainment America. 'They are a great starting point because they exist in some form for just about every platform and microprocessor in the world and most programmers are reasonably familiar with them.'

Yaroze members will also receive utilities that allow conversion of standard audio and graphic files to the PlayStation format. It is expected that several thirdparties will also include cut-down or trial versions of their software: expect at least a fully working demo version of one 3D package, as well as a texture-map editing utility.

Also included on the CD will be a nearly full complement of the famous PlayStation development libraries. So what's missing? First of all, some low-level model data support, which would make it pretty difficult to do something as sophisticated as *Tekken* or *Toshinden* right now. This support may be added at a later date if there is sufficient user demand.

According to Rehbock, though, 'The primary functions that are missing relate to CD access. The system needs to have our Yaroze CD in the black PlayStation itself to work, and we don't allow user-created CDs to be read. Also, the libraries are set up to be more akin to runtime libraries instead of getting compiled in with the user's code. This reduces the transfer time to the PlayStation when the user is debugging or wants to play the game.'

Because Yaroze has to be pirate-proof, a special key disc and a hardware dongle that fits in memory port 1 are required when running programs that were loaded from a PC (obviously, the key disc is not necessary to run standard software on the Yaroze PlayStation). This limits the available space for programs to 2Mb main system RAM, as well as the 1Mb VRAM and 512K sound RAM. Users will also not be able to read from the PC hard drive while running their programs.

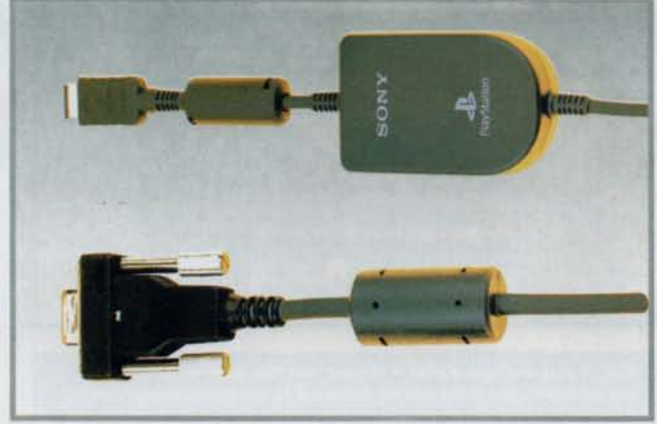
As well as preventing piracy, these restrictions limit the size of games to a certain extent, and they also ensure that the Yaroze program will not compete with the professional development kit. However, the 2Mb RAM ceiling is not as tight for game creators as it might seem at first. For a start, quite a lot can be done in just 2Mb RAM – not only can an extremely robust game engine run in that amount of memory, but a complete game can be executed in RAM as well. The whole of *Ridge Racer* fits into this 2Mb space, as would a single level of *Jumping Flash*. In short, 2Mb is more than enough memory in which to produce a game engine and a fairly solid game, so titles created using Yaroze will not be as restricted as the 2Mb limit may imply to the casual observer.

Also – and more importantly – the only reason anyone would ever regard 2Mb RAM is small in the first place is because developers have been spoiled over the past few years by the increased RAM at their disposal. Not so long ago, after all, developers were creating classic games in as little as 16K – because they had to. Even given the overhead that coding in C (versus assembly) adds, anyone who says that they simply cannot create a good game or game engine in 2Mb must be a very sloppy programmer.

Granted, graphics, particularly textures, may suffer with only 2Mb main RAM, but this will force hobbyists to focus on the most important part of a game: the actual gameplay. Given that the most exciting aspect of the Yaroze

> Given that the most exciting aspect of Yaroze is the potential for innovative games, a lack of graphic sophistication should not be problematic

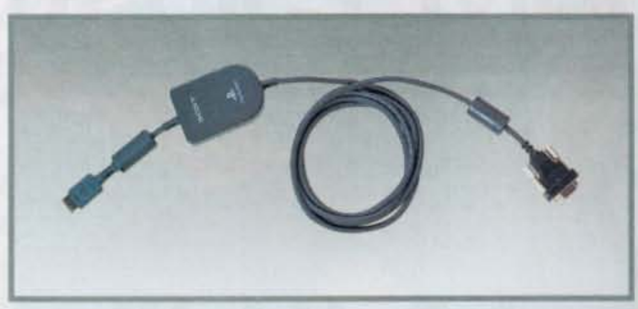




Yaroze is supplied with several manuals (right), which will provide a user's guide to the standard PlayStation libraries. The serial cable (far right) connects the PC to the black PlayStation, but not (surprisingly) through the machine's standard expansion port







This is what the £550 buys – as well as the Yaroze PlayStation, of course. The really interesting bits – the PlayStation *C* libraries – can be found on the silver CD along with example game and demo code

program is the potential for novel, innovative games, a lack of graphic sophistication should not be that problematic.

Rather than the restricted RAM, a more significant barrier to developers will probably be the tools that come with the system. This is bare-bones C and debugging, and anyone who has ever used a well-integrated development environment is unlikely to be thrilled by the prospect of using some of the tools supplied for Yaroze by Sony.

Enter Metrowerks, creator of the award-winning *CodeWarrior C* development environment. Metrowerks (http://www.metrowerks.com) came to fame with a series of PowerPC-native development environments for the Mac. In October, Metrowerks released a version of *CodeWarrior for PlayStation* that runs on Mac or PC.

CodeWarrior for PlayStation costs around £300, but it features such an effective feature set and development environment that any Yaroze member who can afford it should buy a copy. It features an integrated development environment, GUI project manager, file-format converters built directly into the project manager, and drag-and-drop editing (as well, of course, as a full NIST-certified ANSI C compiler, and a C++ compiler that is in track with the emerging ANSI/ISO standard).

If users plan on any serious artwork at all, they'll also want Adobe's *PhotoShop* and probably some 3D app, too, although the 3D demo included on the CD may be enough. A sound utility may also be desirable.

Despite the RAM

limitations of the system and the fact that most users will find themselves shelling out for additional tools following the initial investment in the Yaroze system, Sony's new hardware remains one of the most promising developments of recent years.

Since the dawn of videogames and computer games, gamers have been saying, 'I could do a better job than that.' Finally, through an innovative program that got its start in research and development rather than the marketing department, Sony has given gamers a relatively easy and low-cost way to prove it.

In Japan, Yaroze-authored software has run the gamut from shooting games to Othello to particle-generator demos. Memory card utilities have also been written, so users can trade game saves over the Internet. Probably the most impressive 'utility', though, is a program which emulates a 16bit console system. The point is that users in Japan are already creating programs with Yaroze that Sony never expected.

What kind of games will hobbyists and enthusiasts over here make? That's up to you, but one thing is clear: Sony has delivered its promise of bringing the power of the PlayStation to the people.



Dave Perry

President, Shiny Entertainment

Key Titles: Aladdin, Cool Spot, Global Gladiators, Earthworm Jim, MDK, Wild Nines

Ten tips for game programming novices...

1. Starting
Challenge yourself and don't stop till you work it out. Getting a program to work that you designed is like winning in a game – it gives you the same sort of feeling. You will get very frustrated, but that's good, because it is such a relief to get that damn thing working.

2. Learning
Go straight to the biggest bookstore you can possibly find. A good reference book can fix problems very quickly when you are working late. Use the Internet too.

3. Control
Don't ever take control away from the joypad/keyboard unless you really want to piss off the player.

4. Response
When you press jump, make him jump. Fight animators or anyone who tries to get you to do anything else. Instant response is key.

5. Personal
One of my best tricks is to make every damn possible thing random. If something repeats – for example, if your character looks left and right – don't make it ping-pong in perfect timing like a metronome. Always slip in randomness so that something that does repeat never looks the same twice. Nothing in your game should move to a 'beat'.

6. Technical
Tables are the fastest way to program just about everything. If I have a bird that is flying and it randomly decides to swoop down, should I do a load of maths to pick a random number? Or should I just grab the next value from a previously created table? Your code grabs a value each time it wants a random number, and if the number is greater than 100, make the bird swoop. When your program gets to the end of the table, make it go back to the start. No gamer will notice that the random numbers are being used again – that's the beauty of it!

7. Psychology
The best bit of a game is winning. When a player does well, pat him on the head. It is much more important than you probably think. If he obviously screwed up, make him feel it was his mistake. This will make him think that with another go he will win. The player should always blame himself, not the game.

8 Competition
Speed! If you can work out a way to get the screen to update 60 times a second and someone else can only get four times a second, you have kicked his ass. This is another enjoyable part of programming. Speed comes from being clever and not doing things that other programmers do.

9. Business
If you want a job, make a great demo and send it to every publisher and team you would like to work for. Tell them you've sent it to every other publisher. This means that if they like it, they will move very, very fast. Good people are very hard to find, so if you are great, then apply for a job through our Web page: http://www.shiny.com.

10. Longterm
Sure, learn C to start. But never ignore assembly language – it will never go away. Somebody will always use assembly language to make you look slow. At Shiny, our 3D games use really advanced RISC assembly code and heavily optimised Pentium assembly language. We cannot afford to be beaten. It should be your longterm goal too, and if you master these skills, there's no team in the world that won't want you.

'Challenge yourself and don't stop until you work it out'

The company line

It's great for gamers, but what is Sony getting from Yaroze? Edge went to Sony Computer Entertainment America's Foster City headquarters to find out...

Edge spoke to Sony VP of thirdparty development and R&D **Phil Harrison**, VP of marketing **Andrew House** and VP of R&D **Bill Rehbock** to get Sony's perspective on Yaroze.

Edge: Explain the reasoning behind the system.

Phil Harrison: Philosophically, videogame systems are closed systems that don't allow the consumer to play around and do things with the software. And so you could argue that the last time the consumer has been able to do that was with the Commodore 64 and the Apple IIgs, which means that there is a whole generation of consumers who have an interest in getting involved in the sort of gritty side of development but can't do it.

Edge: Well, you can on the PC...

PH: But the PC is costly and complicated and is a moving target, so your average consumer is going to find it very difficult to get involved with. One of the reasons for producing this program was to bring back the good old days of home development – the idea of hobby development, of two friends in the garage or in the spare room coming up with the next *Boulderdash*. Obviously, there are huge benefits subsequent to that, namely that the industry gets a whole load of newly trained PlayStation programmers who are moving into the thirdparty community or even working for us.

Edge: Do you realistically expect that the next *Boulderdash*, or *Doom*, will come out of a garage?

PH: Well, 'Why not?' is, I guess, the answer to that! If you look at some of the seminal games of all time, they are one-man enterprises. From Peter Molyneux sitting on his own developing *Populous* to Will Wright's *Sim City* or Sid Meier's *Civilization*, you know, these were all one-man enterprises. So why shouldn't the next great game be developed in this way?

Edge: And of course, Sony will retain the exclusive rights to Yaroze-developed games...

PH: Well, not necessarily. We can't deny that that's an opportunity for us. But similarly, there is opportunity for the thirdparty software companies to start working with these people as well. And yet, if we see the next *Sim City* or the next *Populous*, we're going to be falling over ourselves to work with these people and to help make the game into a fully-fledged commercial product. But that's not the only reason why we are doing this.

There is a whole other business model out there for people to make money from perhaps getting involved with a compilation disk that we would do as a 'best of' from this program. I guess you could also call Yaroze job training – so people can learn enough to go get a job at some hot startup company and make their millions on the stock market ten years from now.

Edge: Just how big do you estimate the demand for Yaroze will be in terms of unit sales?

PH: No idea, nor does it matter. The infrastructure to support one user or 20,000 is exactly the same. This is not PlayStation 2. This is not a massmarket consumer proposition. But it is a highly strategic initiative that reaps the reward three years down the line. It does not really matter how big it is.

Edge: What's the best-case scenario for Yaroze?

PH: I think the best thing would be a situation where **Edge** reviews a game,. you give it a fantastic score and in interviewing the programmer, he confesses that this game actually started out when he was a member of the development community and he took it to xyz company and they said, 'This is great. Here's a job. Come work as part of a team and build your masterpiece into a fully-fledged consumer product.' That would be the dream.

I think that there is another benefit or another dream, which would be that there are legions of programmers coming into the marketplace creatively and technically trained on PlayStation. Obviously, it benefits our thirdparty programme for many, many years to come. So it's kind of like an insurance policy in that way.

In a perverse way, I want to see code listings in **Edge**. Typing in stuff from magazines. That's the same concept. I got my start in videogames by typing in listing of games from magazines. I learned to program by screwing around with them and saying, 'This doesn't work, but what about this?' It would be great to see code examples in little routines printed in magazines.





SCEA's vice-president of marketing, Andrew House (top), and Bill Rehbock, vice-president in charge of research and development

Edge: Why call it Yaroze?

Andrew House: It's a Japanese slang expression for 'Let's create!' It was a tagline used for just about everything in the early PlayStation marketing.

PH: I think it embodies the creative empowerment that this program is all about, which is, 'Okay, Mr Gameplayer, you've always sat at home and said, 'I could do better than that.' You know, 'This game sucks, I know I could do better than that.' We're saying, 'Well, here you are, go do it!'

Edge: Will SCEA be pursuing educational opportunities with Yaroze?

PH: Oh yes, absolutely. A logical outlet for this product is into computer graphics and computer science courses at varying educational levels, be it the master's degree level or moving down to vocational training and technical colleges. We'll have a mechanism for government and educational establishments to buy systems.

Edge: How much will Yaroze change the impression of PlayStation in the eyes of the man on the street – perhaps someone who has no intention of ever actually buying one?

AH: I think that it will certainly enhance the overall brand image of PlayStation. I think that it lends an air of creativity to the platform. It obviously shows that we are forward-looking and that we are setting up plans for the future. I think there is a lot of positive impact to be had.

I also think that there will be significant interest from general consumers as to what's developed there and I think that you create a very positive spiral because you have people who are creating their own stuff and want other people to look at it and you'll have a significant number of interested consumers who will be very keen to see how it's emerging.

PH: I think that knowing that this particular game was created by 'one of us'

has some appeal. Empowerment is a very compelling hook for our target consumer. And so knowing that you can do this with a PlayStation, even if you yourself are not going to it or don't have the skills or the inclination, just knowing that PlayStation is capable of this, is a very compelling part of the brand ethos, the thing that makes PlayStation what it is. And I think that will become stronger as time goes on.

Bill Rehbock: The other thing that you are going to see is that people will be seeing the realisation of their wishes. If a guy is up on a website saying, 'Boy, it would be really cool if a game like X existed,' who's more likely to pick up on it and do it, Virgin or a member? No member is going to say, 'Okay, we'll get a focus group to check it out, and run it past the Midwest sales manager.' They'll just do it and upload it to the website.

Edge: How do you expect distribution and creation to work?

PH: I think that what we are expecting to see is that along with the executable program, the source code goes up as well. And a lot of people will say, 'This is how I did it.' Then I expect two or three people to band together and say, 'Let's work on a masterpiece. You do this section of the game, and we will do this bit, and my mate down at USC is going to do the graphics.'

BH: One thing that we have seen in Japan is that we have members who are not programmers or artists but designers who have good ideas. They get together with the programmers and artists and say, 'Here is this diamond in the rough, but it'd be really cool if you did this and this and this.' Then someone else says, 'You know that programmer art really sucks,' and contributes art to it. So we have these titles that are in incubation, that have scattered development members and wow – it's 1975 all over again.

PH: Yaroze is almost the perfect Internet application in that respect. You can work with people you've never met in different countries, where you never have any realtime interaction with them. I think that's the collective ideal of this, and it's something which is completely out of our control. And that's the appeal of it! There are no content guidelines, there's no approval process, there is no requirement that the product fulfil certain taste or commercial requirements. Because this is not a retail program. Full products going onto shelves are sensitive to the dynamics of the marketplace, because there are only so many linear feet of shelf space in stores. But with this, the shelf space is infinite. It's virtual shelf space. So people can go and do what they like, and they don't even have to be games. They don't just have to be for a typical target demographic. They can be all kinds of weird and wonderful things, and that's part of the appeal – what are these people going to come up with?

Edge: What about the RAM? Is 2Mb enough to create a great title in?

PH: Well it's 3.5 if you include the 1Mb of VRAM and half a meg of sound RAM. So that's a lot if you think that *Ridge Racer* is the benchmark. Most users don't have a CD-ROM burner and an SGI to create 15-minute rendered intros, so we don't think it's a problem. It also puts the focus on the idea rather than the production. On commercial software, where you're charging 50 bucks for the product, the focus is on the production values and production quality to justify the price. This doesn't have those kind of commercial dynamics applied to it. And so you can have a really really simple idea that would never stack up on a store shelf. But it is an absolutely boiled-down, refined, well-formed concept. One of the things we will do is look at these pure concepts and evaluate them and go, 'Wow that would make a fantastic product', and work with the creator to turn it into something great. E



Phil Harrison, Sony's vice-president responsible for thirdparty and research and development, is one of the Yaroze evangelists

David Braben

Managing director, Frontier

Key titles: Elite, Virus, First Encounters

Edge: Will this latest development take the UK games industry back to the golden years of home programming?

David Braben: I think any efforts to encourage people into experimentation with game ideas is a good thing. Programming and games have suffered badly from the 'spotty kid in a back bedroom' image for a long time, but the PlayStation and the Saturn have made games more 'trendy'.

The driving force behind a lot of people going into programming games at home in the '80s was the thought of large amounts of money. I think this opportunity is largely past, though it may be a way into a career in games. I would dearly hope that it could inject some new life into the games business. Games development now seems ruled by marketing angles and graphical appearance over gameplay, leading to some pretty mediocre titles.

Edge: What problems can you foresee for potential adopters?

DB: I don't know the details of the kit. The Playstation is a well-designed machine, but the potential adopter will need quite a few tools to get anything interesting out of the machine. I imagine these will be provided with the system, but I don't know this for sure.

They will also be restricted to the machine's RAM to hold game data. I doubt if they would have access to a CD burner, but for many types of game, this will not be a problem.

Edge: Sony claims that this will be easier to program for than the PC. Do you think this is likely?

DB: It's possible. There is a lot of learning before you can start doing games on the PC. Since the black PlayStation is sold just for this purpose, then I would expect that to be the case.

Edge: Do you think you would use the system yourself?

DB: Unlikely, but we would consider it.

Jon Ritman

Director, Cranberry Source

Key titles: Matchday, Batman, Head Over Heels, Monster Max



Edge: Will this latest development take the UK back to the golden years of home programming?

Jon Ritman: No, no and no again – there is a huge difference between buying something like a Sinclair Spectrum for £100 and £2000 worth of kit [black PlayStation + reasonable PC]. The Spectrum was affordable, whereas the PlayStation/PC kit is very expensive, far beyond the price range of the average Christmas present. But the price is only a minor factor – what many people seem to have missed is that if there was a market among would-be bedroom programmers, then they would never have vanished. After all, you only need a standard PC and a copy of *C* to write a full game – a game that may be sold if it's good enough.

There are many advantages to programming on a PC, not least the huge amount of information available in both book form and over the Internet – rec.games.programmer is a newsgroup where any beginner can go for pretty much instant help. In contrast, Sony has always been pretty tight-lipped about PlayStation information and there are no independent books at all.

Also, the PC has many software tools available – you can choose from many freeware and shareware tools or spend a relatively small amount on Microsoft's *Visual C* or *Watcom C* – whereas in my experience the software tools for the PlayStation are a bit on the primitive side (when they work at all, that is).

Edge: What problems can you foresee for potential adopters?

JR: The development tools are, shall we say, 'not fully mature yet'.

Edge: Sony claims that this will be easier to program for than the PC. Do you think this is likely? Will people really use the Yaroze PlayStation instead of the PC?

JR: This may be the case – the 3D maths chips in the PlayStation mean that the programmer doesn't have to write the 3D maths routines – but on the other hand, this only applies to games using polygons – something the PlayStation is very good at. If you want to try anything different, such as Cranberry's Polar Sprouts or Ground Control Engine, you need the flexibility of the PC.

Edge: Would you use the system?

JR: This is where the black PlayStation will come in very useful. We do have a problem with artists needing to see the results of their work as quickly as possible, and as Cranberry is unwilling to buy them all the full development kit, with a black PlayStation coming in at 4% of the price of a full kit, I can see us and other developers finding them very useful.



in association with



No 09

A meeting point for media capitalising on the digital entertainment revolution

Everybody, it seems, wants to be famous. Or at least everybody wants to pretend to be famous in the privacy of their own homes. Thanks to burgeoning media technology, this may no longer have to involve such activities as standing in front of a mirror, hollering into a hairbrush.

Director's Chair is a CD-ROM which attempts to reveal how a Hollywood film gets made. Here, the user is the director and his actors are Quentin Tarantino and 'Friends' favourite Jennifer Aniston. With cinema-goers becoming more and more fascinated by the inner workings of the movies, this is bound to appeal to budding auteurs everywhere.

And if pretending isn't enough, NEC is set to release a camcorder next year which takes advantage of a brilliant new storage device based on digital disc technology. With crystal-clear playback and two hours' recording time, home video makers will at last be able to create such epics as 'Our Holiday In Minorca' and 'Ron's Barbecue' in near-broadcast quality.

If a soundtrack is required, nuMedia provides plenty of contenders. From the trippy ambience of Dr Rockit to the crashing beats of Coastal Breaks, **Edge** scours the periphery of electronic music and returns with the choicest cuts.

Looking for plot inspiration? Philip Finch's cyber-thriller 'F2F' could well provide you with next year's 'Seven'. Just remember where you got the idea.

Gadgets



- NEC
- DVD Camcorder
- ETBA
- Available autumn '97 (Japan)

NEC Disk Cam

As DVD (Digital Video Disc) rolls out, NEC has announced yet another digital disc standard, this time for professional video users. This camera takes CD-sized double-sided discs and squeezes up to 20 minutes of broadcast-quality full-motion footage on each side.

The new format has the same capacity as DVD (around 8.5Gb), but needs both sides of the disc to store it. Plus, decreased running time and a 'code amount control method' algorithm has bumped the picture quality up to near-broadcast standard. A consumer version, using MPEG2 encoding, and offering two hours' recording time, is on the cards too.







NEC Disk Cam Contact NEC, tel: 0181 993 8111

CD-ROM

Music Central
- Microsoft
- £30
- Available now

Music File
- File Productions/Pinnacle
- £14
- Available now from HMV, Virgin, etc

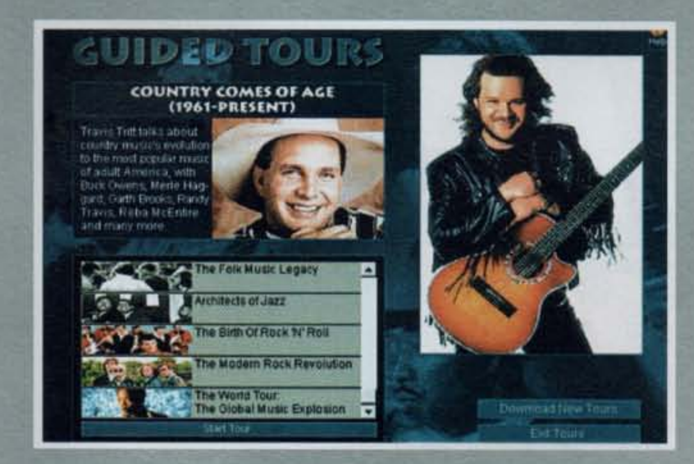
Music Central, Music File

So, what does Microsoft know about music? Apparently not a great deal, because it has opted to buy in most of the material for *Music Central '97* from *Q* magazine. Though not without merit in certain areas, let's face it, *Q* isn't a mag you purchase unless all the hair on your face is around your mouth rather than above your eyebrows.

Sadly, *Music Central '97* contains not one pleasant surprise. It has *Encarta*'s slick interface and is a mine of information if '70s prog-rock is your kettle of bollocks, but a glance at the intro page is enough to confirm your worst fears. This year's new addition to the CD-ROM is a set of multimedia features on musical types, the most modern of which covers 'World Music'. Good old Pete Gabriel does his best, but in reality, the world music fad burnt out a good five years ago. Or maybe it's just the latest thing in Seattle...

Obscure house, techno, trance, drum 'n' bass and trip hop artists are not Music Central 97's forte. Nor are mainstream house, techno, trance, drum 'n' bass and trip hop artists. The erratically selected dance music acts that do appear are rewarded with incomplete discographies, no blogs and certainly no feature-style material. The true pioneers of the various dance scenes, and therefore the only people attempting to make music without conforming to tired old formulae, are uniformly absent. If AOR outfits with big hair, year-long guitar solos and airbrushed album covers excite you, then go and buy a copy of *Music Central 97*. And then stay indoors for the rest of your lives, playing with its Internet links. Please.

Edge didn't hold out much hope for *Music File*, produced in conjunction with that other beardie bastion *Mojo*, either. But its sheer weirdness proved endearing. It doesn't really 'do' anything, it's just a database of every obscure record under the sun, every record shop in the country and most of the music Web sites in existence. The idea is to compile a shopping list of records, select a shop or mail-order service and order them on-line. The only problem is that there's no way of telling whether the shop you choose has – or indeed, has ever had – your desired tunes in stock. Great stuff for collectors, and *Mojo* has wisely limited itself to producing the database, merely schlepping in an ad for the magazine which can be ignored. So no features on the joys of playing air guitar, praise the Lord.





Gadgets

- Sanyo
- 3D TV
- £TBA
- Available next year

Sanyo 3D TV

Immersive home videogaming has come one step closer with Sanyo's flat-screen 3D TV. With working models already on display, this 10" LCD screen uses image-splitting technology to present viewers with great 3D images (as long as they're sitting in just the right place).

In order to give 3D without clumsy glasses, the display quickly changes between left- and right-eye images, with a fine lattice ensuring that each eye sees only the image intended for it. When seated at just the right distance (around a metre), the viewer's eyes combine the images to impressive effect. Unfortunately, this may present a problem for those eightplayer multi-tap sessions. Expect commercial models towards the end of the year.

- Toshiba
- Widescreen TV
- £2,000
- Available now

Toshiba 32W6 TV

If you're fed up with playing big games on small screens, this ultimate widescreen telly from Toshiba will transform your whole gaming experience. For £2,000 you get five speakers (and subwoofer) for earth-shattering Dolby Pro-Logic sound.

The 32-inch superflat screen has 100Hz scanning to reduce flicker, so sitting up close shouldn't deliver a migraine. And when you finally summon up the courage to buy that grey N64 import, the 32W6DB will even play in full colour, thanks to its NTSC playback facility.



Sanyo 3D TV Contact Sanyo, tel: 01923 246363



Toshiba 32W6 Contact Toshiba, tel: 01276 62222

CD-ROM

- Random House New Media
- Developed by Knowledge Adventure
- £50
- Available now



Director's Chair

Steven Spielberg's latest production (for this is it) is the best effort from Mr Hollywood for some time. Unlike the average celluloid Spielberg effort, *Director's Chair* doesn't rely on cloying schmaltz and annoying little kids in order to tug the audience's heart strings. Indeed, it makes absolutely no attempt to tug the audience's heart strings at all. Instead, it's Spielberg's primer on how to find out whether you've got the necessary balls to become a successful movie producer, all wrapped up in an innovative and very entertaining adventure game format.

You start off as a young, untried Spielberg protégé, given space in his studio and a tiny budget. After sorting out the script with the resident writers, it's time to begin shooting (Jennifer Aniston, Quentin Tarantino and, for some reason, Penn and Teller are among the actors you hire), dealing with production difficulties and the tantrums caused by star-sized egos, and finally editing. If your film doesn't bomb, you then get a larger budget and more pressure, plus more control over the technicalities. Keep plugging away and you'll end up making your own mega-budget blockbuster.



Like most adventure games, it takes ages to hack through *Director's Chair*, but unlike most, it doesn't seem like a pointless exercise, as you get to create something and learn a lot about the nuts and bolts of film-making. The cut-throat atmosphere of Hollywood is extremely well evoked, with either hilarious or cringe-making results.

Even though it would may well have been more interesting to ape Wes Craven or Russ Meyer than Spielberg, **Edge** enjoyed *Director's Chair* immensely.

Music



The Music of Sound
Dr Rockit

Not content with producing one of the albums of the year (the twisted, housey '100lbs') Matt Herbert has followed up with his debut album as Dr Rockit. The Music of Sound veers from trip hop to downtempo house with liberal dollops of ambience. Herbert's bouncy tunes and anarchic humour abound, and the (unfashionably slow) beats would knock your socks off even if you didn't know they had been constructed from airline cutlery, apples, and the slap of trainers on a beach. Essential.

Tranced Out
Various
Planet Dog

Planet Dog's appeal lies in its ability to work at the less fashionable (some might say hippy-ish) end of the dance music spectrum, and yet still come up with inspiring tracks. This collection illustrates the point perfectly, mining the rich seam of Goa trance without falling into the clichés of the genre. By turns uplifting, pounding and calming, the tracks are rich in atmosphere and pace, if a little short on such dance-friendly concepts as build-ups. There's much life in the old Dog yet.



Headz 2
Various Artists
Mo'Wax



In which Mo'Wax shows what the hype is all about. Lavelle doesn't do things by halves: Headz 2's 54 tracks are spread across two double-CD packages and its artist roster is enough to get a Bedouin salivating: the Beastie Boys, Alex Reece (as Lunar Funk), Photek (as Special Forces), Black Dog and Money Mark. There's even a Stereo MCs track, and all the old Mo'Wax faves are here. Buy Part A first – it hangs together better. But Part B has at least ten essential tracks. Get both.



Earth Volume One
Various
Good Looking



Fans should be duly satisfied with LTJ Bukem's latest CD collection, featuring tracks and artists from the DJ's appropriately named label, Good Looking Records. However, after the unadulterated drum 'n' bass of Logical Progression, Earth may come as a shock, fusing pure D'n'B with a collection of funk, samba and trip-hop sounds. Tracks like 'Tokyo Dawn' (Doc Scott) and 'Samba with JC' (Poets of Thought) provide the album with some off-beat jazz. Eclectic rhythms indeed.

Coastal Breaks
Various



Looping rhythm samples is one of the most basic dance techniques around, yet breakbeats can also be found at the heart of countless cutting-edge efforts, the finest of which are included here. Encompassing cuts as diverse as ragga-tied 'Work Mi Body' and the seminal 'Papua New Guinea', the set combines 31 tracks that eschew the 4-4 beats of house in search of a more dynamic backbone. The line-up is faultless, as is Adam Freeland's mixing. This is a regular everyday fantasy compilation.

Seven Ways
Paul Van Dyk
MFS

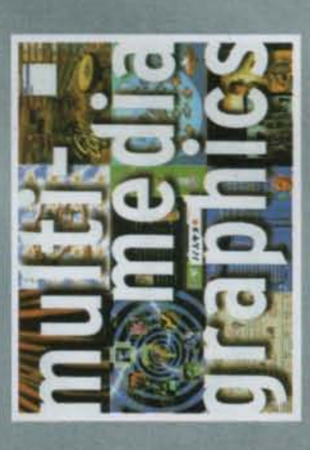


Like many trance albums, Paul Van Dyk's impressive debut may prove hard to listen to as a whole, but it serves perfectly well for those who like to dip in to trance for the occasional taster. Relying on a spiralling house-trance formula – the kind that DJs such as Sasha are renowned for exploiting – Seven Ways is proof of just how far some European house music has come in the past nine years or so. A little tame for some, maybe, but enjoyable all the same.

Books

Multimedia Graphics

- Willem Velthoven/Jorinde Seijdel
- Thames Hudson
- £30
- ISBN: 0-500-01716-6



Multimedia is one of the most over-used words of the '90s and seems to be rarely applied in its proper context. 'Multimedia Graphics', however, knows exactly what its subject matter is.

In this lavish coffee-table manual you will find a catalogue of multimedia design as it stands today. Beginning with a look at the concept of 'the book', and its much over-hyped demise, 'Multimedia Graphics' settles down to a tour through the world's best design houses, covering subjects as diverse as art and culture to educational CD-ROMs.

Most **Edge** readers will have seen at least one example of design contained in this manual's 188 pages. Everyone has marvelled at the graphics and animation in *Magic Carpet*, for example, but that is just the tip of the iceberg. The CD-ROM is gaining in popularity and this book reveals the diversity inherent in the medium.

Edge can't help thinking that this book would have worked better as an actual CD-ROM, however – a paper book seems an odd way to convey all this kinetic imagery. The manual is certainly striking, but multimedia is dynamic and interactive. Here, static images detract from the work on view. Even a short demonstration disk of the works covered would have been a welcome addition.

F2F

- Phillip Finch
- Orion
- £6
- ISBN: 0-75280-361-1

Anyone who has cruised bulletin boards on the Internet will no doubt have encountered the odd Tourette's Syndrome victim: jabbering obscenities from his pizza-box bedroom, with one hand on the keyboard, the other in his pants, and all of his head wedged firmly up his backside.

Fortunately, one of the pleasures of the Net is that you get to zap the losers with merely a keystroke. But what if you couldn't? What if the guy clung on like a bogey? And what if he wanted to administer a helping of Grievous?

This is the scenario of Phillip Finch's smart and sparky cyberthriller 'F2F' (that's 'Face to Face', incidentally – at least it wasn't called 'Web of Lies') in which a tech-head psychopath goes a-chatting on a local message board and, using a 'Trojan horse' program, pulls all his interlocuter's files. Name, address, kinky preferences, the lot. Then he kills them, one by one, in increasingly grotesque ways. What he doesn't bank on is one Ellis Holle, hot-shot programmer and *Doom* fetishist. Holle loves a game. Especially when the prize is life.

Despite its ultimate degeneration into a routine cat-and-mouse thriller on the streets of San Francisco, 'F2F' perfectly captures the potentially titillating, and conceivably dangerous, anonymity of cyberspace. Just as you thought it was safe to go back in the Web.



Realms of the Haunting



ROTH's room designs are easily a match for id's recent effort, *Quake*, with solid-looking architecture and some incredibly effective lighting techniques that give each location a refreshingly distinct feel





Trying to decide whether to brave this supernatural-looking throne (top) is surprisingly tense stuff. A *Doom*-style moment (above)

Format:	PC
Publisher:	Gremlin
Developer:	In-house
Price:	£45
Release:	Out now

That *Realms of the Haunting* should succeed in inducing sensations of unease, wonder and genuine fright marks it out as a unique software experience. Such virtues are not immediately apparent, however, as the game has a clumsy user interface and a disappointing 3D system. Using weapons and items is a pain, with gameplay freezing while a separate inventory screen pops up where much confusion over the two-button manipulation system ensues. And, ironically, Gremlin's True 3D engine is anything but true, as it uses a simplified perspective system and a fudged viewpoint tilt similar to LucasArts' *Dark Forces*. Next to *Quake*'s more solid graphical engine, *ROTH* can't help but look like at least a year out of date – especially the flat-looking prerendered sprites used for its various adversaries.

But it's the storyline and plot-sympathetic level design which are the vital elements here. There's much *Doom*-style gunplay throughout, but progress is more often a case of finding the right rooms, using the right objects, avoiding traps and triggering vital sequences. This might sound hackneyed but it's clear that *ROTH*'s designers have set about creating a game world where the player easily remembers the route to key locations and gets a solid sense of geography. It's a sense of immersion rarely seen since on the PC since the days of *Ultima Underworld*.

There's also the essential element of horror, without which *ROTH* would simply be a fusion of two very familiar 3D game styles – the adventure and the *Doom*-alike. Realtime lighting effects add to the ambience created by the eerie and demonic visuals, while the soundtrack successfully plunders such horror staples as quickening heartbeats, ominous musical crescendos and disembodied shrieks to add to the feeling of unease. There are also some neat





The game's monsters look excellent when viewed at a distance, but as they get closer, bit-mapping blockiness highlights their sprite-based nature. The variety of monsters is also a little disappointing, but when a new one does creep up, the effect is suitably heart-stopping when played alone

voiceover quips from the hero, with key locations or potentially lethal attacks prompting suitable responses. This is a character-based game, the story bringing together several key players to spin out a creepy plot which begins with a dead father and sinister goings-on in a Cornish village, and culminates in all manner of double crosses, demonic forces, and even the Knights Templar – the essential accessory for any contemporary PC adventure game, it seems.

Pushing the plot forward are some 120 minutes of video footage but, thankfully, this potentially embarrassing element is handled intelligently, providing a respite from the blasting, and signalling major plot developments. The visual disparity between these sequences and the game proper is cleverly minimised, by using 3D Studio models composed of the same texture maps found in the realtime sequences. Instead it's the video compression technique which lets things down, the graininess and low colour resolution leaving the footage looking rather cheap – no doubt a result of tailoring the playback system for low-spec PCs.

Brilliantly handled set-pieces, some well-crafted location work, intelligent placing of enemies and a fine balance between game styles ensure that *Realms of the Haunting* is a triumph

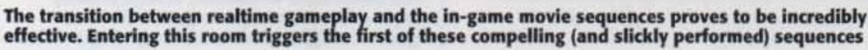
ROTH's slightly laborious control system is no more than a minor disappointment, but it's less easy to forgive the dated nature of its 3D system, particularly as it's appearing in a game which so obviously relies on stimulating the senses to conjure that uneasy atmosphere.

However, brilliantly handled set-pieces, some well-crafted location work, intelligent placing of enemies and a fine balance between game styles ensure that the game is a triumph. It's perhaps less of a next-generation title than was hoped for, but project leader Tony Crowther and his team at Gremlin should be proud nevertheless.

Edge rating:

Eight out of ten



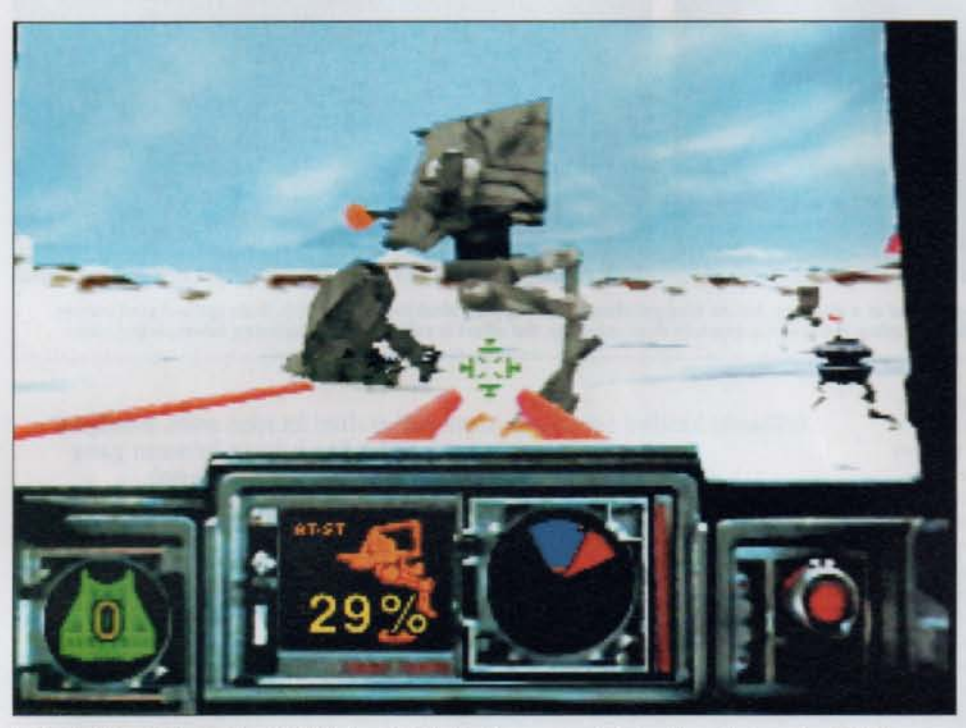


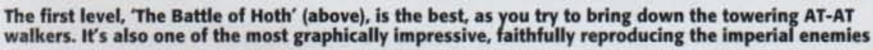
The transition between realtime gameplay and the in-game movie sequences proves to be incredibly effective. Entering this room triggers the first of these compelling (and slickly performed) sequences



The extensive blue-screening was done at Bright Light Studios in Coventry and mixed in-house

Shadows of the Empire




The first level, 'The Battle of Hoth' (above), is the best, as you try to bring down the towering AT-AT walkers. It's also one of the most graphically impressive, faithfully reproducing the imperial enemies











The junkyard, in common with many of the other levels, is on-rails 3D

Format:	Nintendo 64
Publisher:	Nintendo
Developer:	In-house
Price:	£90 (import)
Release:	Out now (US)

It's not difficult to understand why *Shadows of the Empire* was one of the most eagerly anticipated N64 titles. The combination of the formidable 'Star Wars' licence with arguably the most accomplished PC development talent in the US (LucasArts, of course) and the most powerful console currently available has led many to expect a near-perfect game. They are going to be disappointed.

Made up of ten relatively short levels, *Shadows* lurches between frantic, compelling blasting and lacklustre *Doom*-style corridor tedium. The first level bodes well, as you take control of a snow-speeder and battle to bring down hulking AT-AT walkers. The enemies are well animated, and the textures smooth and detailed, but your freedom is limited to a relatively small play area. You can, however, go anywhere you want in that area, circling the walkers and firing tow-cables to bring them crashing to the snow, giving the player a real sense of being part of the action.

However, level two, a *Doom*-style jaunt, is where things begin to go wrong. The player's character, Dash Rendar, looks adequate in thirdperson view, but his model appears simplistic, with few polygons and uninspiring animation. Plus, he casts no shadows on the floor and when wading through the sludge of the sewer level, makes no ripples. The result is that he rarely looks 'part' of the scene. Taking the firstperson perspective should help to bring you into the game, but the level design is so limited that boredom quickly takes hold, as you shoot one lame Stormtrooper after another to reach your goal. (Although it could be argued that, in keeping with the flavour of the movies, they should be incredibly easy to dispatch.) A few blasts later, and the level is done. There are no keys to find, few secret areas, and little to entertain as you plough on through the plain corridors.

Things pick up considerably with level three, 'Asteroid Chase', an on-rails affair which borrows heavily from *Star Fox* and features huge Star Destroyers to fly by. The pace drops once again with level four, 'Ord Mantell Junkyard'. It's on rails in more than one sense, as you jump from cart to cart on a moving train, bound for a limited shoot-out finale with bounty hunter IG-88. Ditto for 'Gall Spaceport', the next *Doom*-style section, which at least has the added



The *Doom*-style sequences, though initially impressive, soon begin to grate with their spartan corridors and lack of engaging puzzles



The AT-AT level is the most enjoyable, and succeeds more than any other in conveying a feeling of being 'in' the 'Star Wars' movies.



gimmick of a jet-pack and the chance to fight the infamous bounty hunter, Boba Fett.

And so it goes on. The firstperson corridor sections are all disappointingly dull, (*Dark Forces*, LucasArts' *Doom* clone, was similarly afflicted), whereas the flying sections are dotted with exciting moments. One level is particularly good: the thrilling speeder-bike chase through Mos Eisley is incredibly fast, exceeding even *Wipeout* for sheer adrenaline, but the high is ruined as you plod through yet more of the bland Dash Rendar levels that follow.

Relief, and some much-needed action, is thankfully provided by the last level, 'Skyhook Battle'. This presents more of the *Star Fox*-style space combat, but it's too little, too late.

Music is where *Shadows of the Empire* does score highly. Fears previously expressed over the quality of cart-based sound prove unfounded as arrangements of John Williams' classic score belts out from the speakers. Each level has its own theme and, although looped, is clever in construction. The sound effects, too, are all vintage 'Star Wars', and conspire to create an authentic atmosphere, in spite of the appallingly 16bit-like cut-scenes, which are so poorly depicted

> the firstperson corridor sections are all disappointingly dull whereas the flying sections are dotted with exciting moments... the speeder-bike chase is particularly good

that it's hard to imagine George Lucas approving any of them prior to the game's release.

If the problem with *Shadows of the Empire* could be summed up in one phrase, it would have to be 'identity crisis'. Perhaps because Nintendo wants to appeal to children as well as jaded adult gamers, and perhaps because LucasArts was so eager to include all of its initial ideas, the result is confused. Sometimes *Shadows* tries to be *Dark Forces* and, at other times, a strange hybrid of *Rebel Assault* and *Star Fox*. In trying so hard to cover all the possibilities, LucasArts has failed to hone any one of them to a fine point. Far from being the triumphant N64 showcase that many hoped for, *Shadows* is a confused, unfocused title that will do little to silence those who believe Nintendo has created a system that it alone can master.

Edge rating:

Six out of ten



This level (above) recreates Mos Eisley and gives the player a speeder-bike to race with. The sensation of momentum is amazing, and it's impressively smooth, but it's over far too quickly, and these more accomplished levels are sadly not enough to raise the overall quality of the game







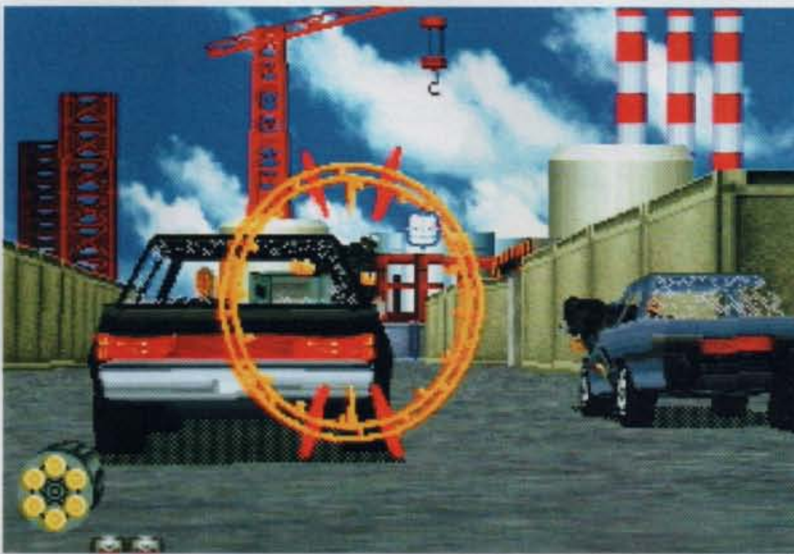


Virtua Cop 2









In Sega's ruthlessly effective on-rails shoot 'em up, *Virtua Cop 2*, the enemy can appear from anywhere, albeit briefly. Helicopters (top left), speeding automobiles (main), subway passageways (above left) and cruiser navigation computer installations (above far left) all conceal potential assailants





Knocking the gun out of a terrorist's hand counts as a 'justice shot' – better score, much less satisfaction

Format:	Saturn
Publisher:	Sega
Developer:	AM2
Price:	£45
Release:	Out now

Every time it looks as though the Saturn is faltering, another AM title comes along to re-establish why the console has so many devotees. *Virtua Cop 2* is Sega par excellence. In terms of form, it is the ultimate arcade game: endlessly inventive yet driven by a narrow, simplistic plot.

Visually, the Saturn does a remarkable job of replicating the coin-op blueprint. Yes, some of the luxuriously detailed texturing has been removed to maintain a slick framerate, but in the heat of play it's difficult to notice. In fact, *Virtua Cop 2* looks marvellous; its backgrounds are well drawn and imaginative, and there is a real sense that the action is taking place in a complex and elaborate world.

But it's the game's immediate buzz that really impresses. *V-Cop 2* literally grips the player and keeps hold by heaping ideas on top of each other in a relentless barrage of visceral action. There are so many classic set-pieces it's difficult to pick out the best examples. File One's Hollywood-style car chase is perhaps the game's defining moment: motorbikes screech in front of the player's vehicle, innocent pedestrians race across the road screaming, while enemy cars swerve about spilling gun-toting terrorists en route. This is adrenaline-soaked action at its finest.

And there's more. One of the best things about the game is that almost everything can be destroyed. In File Two, for example, you shoot your way through a cruise liner, blowing bottles of champagne to pieces in the ballroom and demolishing the bridge's navigation computers. AM2 has stuffed *V-Cop2* with as many different shoot-out situations as seems possible — and, for a while, at least, it represents one of the most absorbing experiences possible in front of a TV.

But, of course, *V-Cop 2* is ultimately just as limited as its predecessor, and once its secrets have been discovered, every route tried (halfway through each stage, two directions are selectable) and the game completed, only the most anal of gamers will want to go back to attempt 100% accuracy scores.

Taken out of its arcade context, *V-Cop2* may disappoint those looking for a longterm challenge — or at least one that doesn't involve playing from the start again and again. Depth isn't defined by how many secrets a level hides, it's defined by the intrinsic nature of gameplay. This isn't a deep game, merely fast-paced fun. Enjoy it while it lasts. E

Edge rating:

Eight out of ten









The game's on-rails nature allows for a cinematic feel. Baddies are thrown through the air, Peckinpah-style, when shot (left), and action set-pieces are viewed from a variety of interesting camera angles

Virtual On







Though *Virtual On* makes excellent use of the Saturn's raw power – moving the game's components at an impressive rate – the coin-op made use of a range of transparency and lighting effects. The absence of these in the home version is extremely noticeable and makes for a less sparkling game

As befits the development team which brought *Sega Rally* to the Saturn (AM3), *Virtual On* is a super-slick conversion of the popular coin-op. With its roots planted in the standard fighting game format, the game is the most imaginative and different big-name title to be produced by any of Sega's in-house development teams.

Games take place in a series of large arenas throughout which are scattered a variety of crates and stacked obstacles. Two robotic competitors (mechas) take part in a fight to the death while a counter ticks down. As with other polygon fighting games, bouts end through either a knockout or ring out.

However, while normal beat 'em ups are rather static affairs, the key to *Virtual On* is the speed in which its robots can rush around the playing areas. For a large proportion of any bout the enemy mecha may only be visible on the head-up display radar as the player tries to manoeuvre into a good position for attack. The key to success in *Virtual On* is managing to organise attacks both spatially and temporally, something which gives it an (albeit tenuous) parallel with tank battle simulators. The tactical positioning-and-timing element is accentuated when players learn the possibilities afforded by the arenas' obstacles.

Each of the eight initially selectable mechas have a finely balanced set of special weapons. These can generally be used at long range, hopefully softening up opponents before close-quarters, hand-to-hand combat begins. While the graphics in the game are generally excellent, attack and explosion effects reveal the Saturn's limitations: during particularly frenzied assaults, pixellated explosions become a noticeable problem, obscuring the action and possessing none of the transparency that PlayStation titles often enjoy.

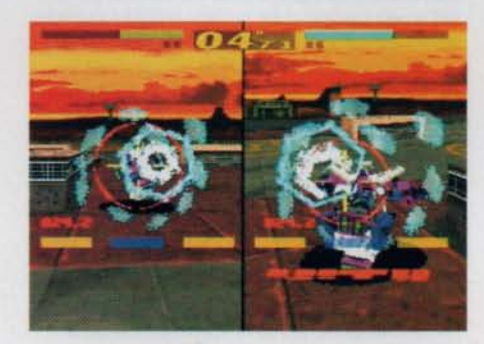
The most common concern levelled at home versions of arcade games is that they often lack longevity, and *Virtual On* is no exception. The feeling with it is that after a couple of hours play against the CPU it's possible to see most of what the game has to offer. However, the excellent (and fast) split-screen twoplayer mode more than compensates for this aspect and ensures that the title should last most gamers well into 1997.

So at last some good news for fighting-game fans with a predilection for Japanese-styled robotic action, giving AM3 the opportunity to prop up Saturn sales at Christmas once more.

If only Sega could show thirdparty developers how to program the Saturn this competently, the ongoing conflict between its and Sony's machine might start to look less woefully one-sided.

Edge rating:

Eight out of ten



Though the vertically split twoplayer mode maintains the overall speed of the oneplayer affair, some peripheral detail is naturally lost

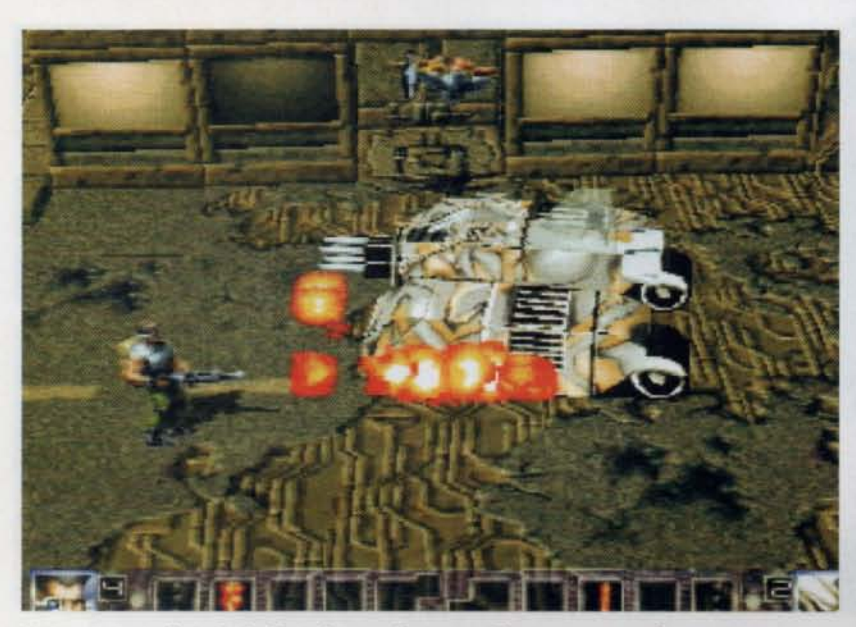


Japanese gamers will be able to play with a home version of the coin-op's twin-joystick controls. A UK release is currently unlikely



Format:	Saturn
Publisher:	Sega
Developer:	In-house (AM3)
Price:	£45
Release:	Out now

Contra: Legacy of War



Contra: Legacy of War is the first of Konami's *Contra* titles to move away from pure 2D gameplay and visuals. However, the polygonal landscape often creates confusion







In classic *Contra* style, each level begins quietly and then erupts into an onslaught of enemy tanks, foot soldiers and vainglorious fire power





Despite some visual updates, *Contra* looks primitive compared with some 'modern' firstperson shoot 'em ups

Format:	PlayStation
Publisher:	Konami
Developer:	In-house
Price:	£45
Release:	Out now

It's ten games in ten years for Konami's *Contra* series: a bloodline of shoot 'em ups which debuted in the arcades back in 1987. However, discounting the various conversions on NES, Mega Drive and Game Boy, it turns out that this is the fifth original *Contra* game. It is the first, though, to break in a major way from the simple left-right scrolling formula. The 1992 SNES original *Contra III: The Alien Wars* (aka *Super Probotector*) introduced a few top-down scrolling levels, but everything was still firmly in two dimensions. *Contra: LOW* has, for better or worse, embraced the world of polygons and gone for the full 3D treatment.

Or has it? The levels are certainly made up of 3D polygons, as are fixed enemy installations such as gun emplacements and larger enemies like tanks, aircraft and the more bizarre alien creatures. However, enemy soldiers, bullets, explosions and, more importantly, the player's character, are sprites. This makes for a disappointing amalgam of graphical styles and fans will lament the loss of the fantastical Giger-influenced visuals that were one of the hallmarks of the series.

But this mix of 2D and 3D has a much more serious effect on the gameplay. Getting shots on target can be tricky, but this causes nowhere near as many problems as the confusing collision detection. Like the previous *Contra* games, success in *Contra: LOW* revolves around learning level layouts, attack patterns and – crucially – learning just how close to enemies and enemy fire you can go without getting hit. Steering your way through the sometimes packed screens depends upon being able to recognize where you can safely tread and how close to danger you can skirt. In this game, thanks to seemingly imprecise congress of 2D and 3D, this is no easy task.

For the most part, the game follows the same conventions as the previous *Contra* titles. Individual levels begin with a few enemy foot soldiers running on screen and, as you progress, gun emplacements pop up and target you. Also, things come to a halt for two or three mid-level bosses and one final large boss, all of which are attractive polygon creations that usually put the rest of the graphics to shame. In true *Contra* tradition, they have their weakspots and there's a technique to be learned to beat each of them.

In 2D, *Contra: LOW* would have been an enjoyable, if old-fashioned romp. In 3D, it's a mess, with shabby sprites and a murky palette giving it a rough, unfinished look. Graphical glitches and a close game camera that doesn't let you see far enough into the distance deliver the killer blows to finish the game off. This poor translation of the classic *Contra* gameplay into 3D is a huge disappointment. **E**

Edge rating:

Four out of ten

Jet Moto



The jetskis in *Jet Moto* are not confined to the water, with river and coastal circuits dotted with islands (above) and some tracks entirely landlocked (left)

The sheer delight of Nintendo's jetskiing pace-setter *Wave Race 64* is something that others will find hard to emulate. *Jet Moto* aims high and falls short but at least manages to bring more new ideas to this burgeoning genre than any of its immediate competitors.

For a start, there are the controls which add 'turn-tightening' brakes (similar to *Wipeout*'s air brakes), the ability to lean out either side of your jetski (further tightening your machine's turning circle) and magnetic grapples. These lash onto poles at certain corners and whip the player's 'ski around them – the closer to the pole, the quicker the corner will be taken. Then there are the circuit designs: the ten tracks allow for racing across land, sea and ice as well as water and include some swampy bayou circuits which are a real contrast to the usual coastal romps.

But for all its attempts at innovation, *Jet Moto* simply doesn't feel polished enough. There exist far too many unsightly clipping problems and everything in the game looks angular and unattractive. Plus, there's a significant disparity between available views, the behind-the-bike options feeling unresponsive, with the firstperson view overacting wildly to seemingly every control twitch.

While *Jet Moto* seems full of potential, it fails to deliver all the promising aspects it hints at, leaving it merely a competent, fairly playable but ultimately disappointing racing game.

Edge rating:

Five out of ten

Format:	PlayStation
Publisher:	SCE America
Developer:	Singletrac
Price:	$50 (approx. £30)
Release:	Out now (US)

Twisted Metal 2

Hardly a major departure from the original, *Twisted Metal 2* is a slightly more refined version with the same basic gameplay and an assortment of new cars and city arenas. Car-versus-car arena combat is still what it's all about and its simple knockabout gameplay remains its strength.

Whether cruising around a city or fighting in a custom arena, playing *TM2* feels like taking part in a beat 'em up with cars. It certainly doesn't feel much of a driving game as the vehicle controls are horrendously basic and even the worst PlayStation racer can boast more realistic handling. But that's not what it's about. It's about taking out every other car in any way imaginable – ram them, force them off the edge of a roadway or, most likely, blow them away with one of the game's many weapons.

There are six new vehicles for *TM2*, including an F1 car, a bulldozer, and the very bizarre 'Axel', a giant muscle man strapped between two huge wheels. Also new are the eight 'battlegrounds' which range from crowded areas of major cities to custom-built arenas, and all circuits have secret passages and hidden areas, often revealing power-ups and weapons.

Pushing the beat 'em up connection even more are the 20 or so special moves and combo attacks.

Like any beat 'em up, *TM2* is great fun as a twoplayer game, less so in the conventional oneplayer mode. Not an essential upgrade, then, but a welcome expansion on an original driving game.

Edge rating:

Seven out of ten



Buildings and structures in *Twisted Metal 2* are disappointingly basic (above) and fairly scarce. Split-screen 'dogfights' are by the far the game's best element (left)

Format:	PlayStation
Publisher:	SCE America
Developer:	Singletrac
Price:	$50 (approx. £30)
Release:	Out now (US)

Wayne Gretsky





Though there are no player reflections on the ice, for example, *Gretzky* is nevertheless a visually convincing 64bit experience. In gameplay terms, the simultaneous fourplayer mode gives it a tremendous boost

Wayne Gretzky's 3D Hockey is ice hockey with an arcade flavour: the puck zips about the rink leaving a trail behind it, player collisions are like car crashes, and goalies seem to have been softened up to allow plenty of points to be scored.

Graphically, *Gretzky* bodes well for future N64 sports games, its players looking sturdily real and its replay mode offering an opportunity to zoom in on in action which, rather than losing detail, actually increases it, right down to ice spraying off sticks.

The N64's analogue controllers, meanwhile, prove perfect for controlling the players, allowing them to be led in graceful arcs about the ice.

The arcade approach won't appeal to proponents of drier simulations like *NHL*, although a huge range of options allow the teams to be upped from 3- to 5-a-side, the rink to be increased to regulation size and all sorts of authentically obscure rules to be introduced.

Wayne Gretzky is exactly how ice hockey should be on the Nintendo 64, and provides a ray of hope in the search for quality thirdparty titles.

Edge rating:

Seven out of ten

Format:	Nintendo 64
Publisher:	Midway
Developer:	In-house
Price:	£90
Release:	Out now (import)



Cruis'n USA

Cruis'n USA was never the game it should have been. Created by a team headed up by Eugene Jarvis – the legendary designer responsible for *Defender* – it pulled the crowds in the States as a coin-op, but never really caught on in Europe. The premise is sound (race around the US, visiting famous landmarks) but the N64 version has been more than two years in development and has lost a lot along the way.

Truth be told, it never had that much in the first place, but the home version is dogged with astoundingly poor frames rates (often around 20fps), which yield a depressingly jerky driving experience. This would almost be forgiveable if the backgrounds and cars used impressive geometry, but they don't. Pop-up is a problem, too, something which Midway has attempting to disguise using a fading technique. Ironically, this only accentuates its existence. Furthermore, collision detection is appalling (it's possible to drive straight through some trackside obstacles) and there's no real sensation of speed. Finally, the game is simply too short-lived.

This is precisely what Nintendo didn't want: poor-quality thirdparty software that fails to convince anyone of the N64's merits.

Edge rating:

Four out of ten





Poor frame rates conspire with lacklustre scenery and badly designed vehicles to create a singularly unsatisfying experience in *Cruis'n USA*

Format:	Nintendo 64
Publisher:	Nintendo
Developer:	Midway
Price:	£90
Release:	Out now (import)

Killer Instinct Gold





The *Killer Instinct* coin-op provided gamers with a 2D combo-fest which worked well two years ago. Now the gameplay seems tired and there's little that impresses

Incredibly, it's been more than two years since *Killer Instinct* hit the arcades. Stubbornly 2D, it won many fans over with a staggering range of combos and hi-res prerendered sprites. On the N64, however, it now seems horribly dated.

The main problem is that *Killer Instinct* was overrated the first time around. What Rare has managed here is to create game that suffers the same problem as the original: once learnt, the combos leave the player with little recourse to spontaneity. The oneplayer game is predictable while the twoplayer mode, though obviously better, still boils down to being a mad rush to see who can press the most buttons in the quickest time. The beat 'em up genre has moved forward since *KI*'s original appearance, and the thought of merely reeling off endless combos until one fighter falls over now seems incredibly bland.

Hard-core fans will nevertheless find much here to take to their hearts. Graphics are impressive on the whole, with a selection of fantastic 3D backdrops that show off the N64's power (character animation, however, is disappointing, having been trimmed down in order to fit within the confines of the cart).

Overall, a pretty but derivative beat 'em up.

Edge rating:

Six out of ten

Format:	Nintendo 64
Publisher:	Nintendo
Developer:	Rare
Price:	£90
Release:	Out now (import)

Edge broadens testscreen by rounding up other releases from this month...

X2 — PlayStation

Publisher	Team 17
Release	Out now
Price	£40

The Amiga was, without doubt, the premier games machine in the late '80s and early '90s, and one of its most accomplished titles was Team 17's *Project X*. This over-loaded blaster packed the screen with sprites aplenty, and pushed even the most accomplished of gamers to their joystick-waggling limits.

X2, the 'sequel' for the PlayStation, looks, it has to be said, remarkably similar. There are plenty more colours, and yes, there are even more sprites used throughout the game, but there's not a lot about this title which marks it out as 'obviously updated' for the potential of the PlayStation platform.

That said, *X2* presents a solid challenge and is, in comparison with other 2D shooters for Sony's gamebox, really rather enjoyable. It's just a shame some of the graphics, and indeed the gameplay, hark back half a decade.

Edge rating: Six out of ten



Suikoden — PlayStation

Publisher	Konami
Release	January '97
Price	£45

With no more than a casual glance at its rough 16bit-style demeanour, it would be easy to dismiss *Suikoden*. This style of turn-based RPG has been seen many times on the SNES, often with better graphics and sound than the PS manages here.

Sadly, such a view would miss the point completely. Many Japanese developers have approached the 32bit CD-based consoles with little interest in 3D, seeing them instead as a means of making the same old games bigger and more complex. *Suikoden* is a fine example of this philosophy. Its unambitious presentation may not win any converts but the emphasis on strategy, tactical depth and vital sub-plots will be welcomed by fans.

Despite the (customary) clumsy translation, Konami's brave UK release comes highly recommended to those who enjoyed Capcom's comparable *Breath of Fire* series.

Edge rating: Seven out of ten



FIFA '97 — PlayStation

Publisher	Electronic Arts
Release	Out now
Price	£45

The original PlayStation incarnation of *FIFA* was a relatively disappointing affair. Overly complex gameplay, stilted player movement and surprisingly fuzzy visuals ensured EA's multiformat chart topper was outsold and outperformed on the park by both *Actua Soccer* and *Adidas Power Soccer*.

The sequel is an improvement, though not quite the title that EA's licence warrants. John Motson, the solo commentator in the original, is joined by anchorman Des Lynam and pundit Andy Gray and the team present seamless, televisual quality commentary – the most convincing in a football game to date, in fact. Visually, it's sharper all round and the player movement is considerably more fluent. There are three difficulty levels – in 'beginner', there's a pleasing pass-to-feet option which helps the game flow.

A step in the right direction, then, but not a title winner.

Edge rating: Six out of ten



Blazing Dragons — Saturn

Publisher	BMG Interactive
Release	Out now
Price	£40

A game partially produced by the director of 'Monty Python and the Holy Grail', widely acclaimed as one of the funniest movies ever made – what a build up. How could it fail? Well it has.

Following a long line of supposedly funny adventure games that have failed to live up to expectations, *Blazing Dragons*' only real lifeline is that it is pretty much on its own on the Saturn, with the notable exception of *Discworld*.

Adventure games live or die on their puzzles, and *Blazing Dragons*' are far too obscure. The first puzzle experienced is not solved by skill, but by trying every object you can find in the relevant place until one of them finally works. And it doesn't really get better from there.

Even worse, though, is that when you discover the solution by accident it still doesn't make any sense – the cardinal adventure game sin.

Edge rating: Four out of ten



Crime Wave — Saturn

Publisher	Eidos Interactive
Release	Out now
Price	£40

Requiring the player to pit his wits against computer-controlled bounty hunters or a second player in a partially workable split-screen affair, *Crime Wave* is a game about driving across vast urban landscapes in search of other vehicles.

Sadly, its visuals can barely compete with many of its more recent 32bit contemporaries, with an uncomfortable 360° camera system that confuses proceedings and makes the matter of controlling the player's vehicle dreadfully – and unnecessarily – frustrating. An attractive intro aside, in fact, there is very little to either impress or excite.

If *Crime Wave* had been developed as a Mega Drive title then perhaps the situation would have been slightly more acceptable, but with the markedly superior *Sega Rally* available for the same price, it's difficult to find anything of note in this poor action driving game.

Edge rating: Four out of ten



Fragile Allegiance — PC

Publisher	Gremlin Interactive
Release	Out now
Price	£40

Sometimes the most initially impenetrable games turn out to be the best. And sure enough, while getting to grips with *Fragile Allegiance* is going to take at least three days of head-scratching, it turns out to be a fine game of space strategy.

Having bought a mining franchise from a huge galactic megacorporation, the player has been given in return a small asteroid and enough equipment to set up a mining colony. By digging up ore and selling it, the player must finance the expansion of the colony to include any neighbouring asteroids his scout ships may discover.

Things are complicated further by races of aliens who're after ore as well, and who you can either trade with or, by building missile silos and fleets of spaceships, attack. Once all this has been mastered, *Fragile Allegiance* is a tremendously absorbing and rewarding game.

Edge rating: Eight out of ten



Gallery

Edge scans the computer-generated imagery scene, unearthing the work of some of videogame design's most talented individuals. This month, a broad cross-section from the east and west come under the microscope

Westwood Studios' internal design teams have created almost four hours of animation for forthcoming 3D adventure *Lands of Lore II*. These images are the work of lead artist Rick Parks and Elie Arabian. Parks is a *Lightwave* expert, which he has used to create the extraordinary quality of light in the snow scenes – *Lightwave* software is especially good at rendering refracted and reflected light.

The textures were created using Fractal Design's *Fractal Paint*, which is ideal for organic textures such as skin and liquids (the gore seen here, for example).

The game features an innovative mix of interactive cut-scenes and plot-advancing sequences. Much of the true 3D environment relies on prerendered backgrounds to lend atmosphere, something that certainly won't be lacking if these early scenes are anything to go by.

All images rendered on PCs using New Tech's *Lightwave*, *Fractal Paint*, *3D Studio Max* with plug-ins, and *Photoshop*, by *LOLII*'s lead artist **Rick Parks** and **Elie Arabian**











Like its predecessors, ***Ultima IX***, **the latest action adventure from Origin, is based around a strong swords 'n' sorcery storyline. Here, the game plot is helped along by the inclusion of several CGI interludes.**

Standout moments include the surreal dream abduction of Lord British — inspired by seminal 1904 comic strip, 'Little Nemo in Slumberland' — and the conversation between two enemy army leaders preparing for war. The latter includes some of the most realistic and life-like facial expressions Edge has seen in a rendered sequence from a game. Incredibly, they weren't created through the use of complex motion capture techniques, either: this is pure computer animation

Battle scenes and Lord British dream sequence created by **Bob Frye**. Lord British characterisation and design by **Dennis Lubet**. All images modelled, animated and rendered using *Lightwave* and *3D Studio*. Original character design by **Richard Garriot**











These military images are from Japanese strategy/RPG title *Metal Gear*. Developed by Konami's KCEJ team in Japan, these rendered sequences are set to provide in-game cut-scenes that will illustrate much of the action – a technique previously used in Delphine's *Fade to Black*. The character to the left is 'Ninja', who forms part of an elite tactical squad made up of such bizarrely named members as 'Revolver Ocelot', 'Psycho Mantis' and 'Solid Snake'.





Driving games remain the most popular of coin-ops, and fans now have two more examples to look forward to, including the long-awaited sequel to *Daytona USA*

Super Car Race (working title)





As far as scenery goes, expect the usual complement of tunnels and on-track signs

It's been a good two-and-a-half years since *Daytona USA* appeared Sega's AM2 division concentrating in the meantime on the incredible *Virtua Fighter 3*. The lateness of a sequel can perhaps be explained by the lateness of the Model 3 board itself, which is being pushed to its limits in this *Daytona USA* sequel, codenamed '*Super Car Race*'.

AM2's **Mr Nagoshi**, the producer of both *Daytona USA* and *Virtua Racing*, is heading up the project, and his racing game expertise should ensure that this coin-op is as successful as its cousins. His obsessive attention to detail has lead him to tour the major super-car manufacturers of the world, researching their handling and driving characteristics, which will give '*Super Car Race*' more of a car-based emphasis than *Daytona*, where the race itself was always the priority.

Expect to see a Ferrari F40, MacLaren's F1, a Dodge Viper and Porsche's 911 GT2 in the line-up, as well as a number of nondescript stock cars.

The actual feel of driving these cars is something that AM2 is keen to convey – should a car touch a wall or another car the driver will experience force feedback, with each car sounding and feeling different.

There are four courses planned – Beginner, Mid-Level, Expert and 'Special' – although only one course is presently anywhere near complete.

The combination of AM2's pedigree and the Model 3 board's power ensures '*Super Car Race*' an eagerly awaited release. It's rumoured to be Mr Nagoshi's final racing title, but it has the potential to be one hell of a swansong.



While *Sega Rally Championship* was an ongoing racing experience, '*Super Car Race*', like *Sega Touring Car Championship*, is circuit-based. This should make for a more enjoyable and competitive multiplayer environment. A fourplayer link-up option is likely



The Model 3 board allows for a quite breathtaking level of detail – witness the driver visible through the glass window of this super-car



Despite its early promise, AM Annex's *Sega Touring Car Championship* was seen by many as disappointing – Sega will be hoping this AM2-developed game fares better





Like *Virtua Racing*, '*Super Car Race*' features pit lanes for essential repairs (above)

Developer:	Sega (AM2)
Release:	TBA
Origin:	Japan

San Francisco Rush



Yes, it's one of San Francisco's most famous landmarks, the good old Golden Gate Bridge

Atari Games' *San Francisco Rush: Extreme Racing* (to give it its full title) is based on the Voodoo graphics chipset – as used in the 3Dfx PC card – and is one of the first wave of coin-ops to incorporate such technology.

Using two 3Dfx chips in parallel, driven by one host processor, *SFRER* is characterised by hi-res graphics and reasonably fluid performance.

Its course allows players to drive around the steep hills and narrow streets of San Francisco, which has been modelled in amazing detail, even allowing numerous shortcuts through its varied environs.

By way of extras, the cabinet features a clutch pedal for manual-transmission enthusiasts, and steering-wheel feedback reminiscent of the *Hard Drivin'* coin-op.

Aurally, an 8-inch woofer speaker placed in the back of the cabinet's seat delivers a choice of six soundtracks to race along to.

Though the game doesn't have handling mechanics to match the likes of, say, *Sega Rally Championship*, by way of compensation it has some remarkable jumps and one of the most beautifully realised and exciting racing environments seen in a driving coin-op.

Overall, then, a fine diversion until Sega's next offering arrives.





Though the game's graphics are impressive, they lack the solidity of Model 3 visuals, with cars occasionally having a somewhat pasted-on-the-background look









Heading earthbound following one of the game's many jumps (above). Crashes (right) are handled extravagantly

Developer: Atari Games
Release: Out now (US)
Origin: US

Toaplan Shooting Battle I

Once hugely popular, vertically scrolling shoot 'em ups have recently died. Banpresto is leading a resurrection on the PlayStation

Toaplan made a name for itself in the late '80s and early '90s specialising in vertical shoot 'em ups of the calibre of *Flying Shark*, *Truxton* and (included here) *Ultimate Tiger*, and it was only the gradual demise of the PCB market that sealed the company's fate.

Given the number of shoot 'em ups competing for players' coins, it's not surprising that only the most expertly crafted examples survived any length of time. In hindsight, what strikes most about these kind of games is just how difficult most of them were. This was a time when designers had to compensate for high levels of player expertise by making games supremely tough.

With Toaplan's coin-op collection licensed to Banpresto for conversion to 32bit machines, this initial compilation includes *Tiger Heli* (from 1985), *Ultimate Tiger* (1987) and its more established twoplayer version *Twin Cobra* (1987). Although popular in its day, *Tiger Heli*'s dated graphics clearly betray its 8bit coin-op origins and the latter two games sharing the CD have more to offer by comparison, with complex sprite patterns, reasonably attractive graphics and fast-paced, uncompromising gameplay.

Having already appeared on the PC Engine and FM Towns Marty, *Ultimate Tiger/Twin Cobra* finally gets pixel-perfect treatment on *Shooting Battle 1*. Unlike the PC-E version, there's even an option to permit a full-screen arcade-style display (using a TV turned on its side).

There are also options to limit the number of continues, although the way the game places the player back in the level devoid of power-ups means that even the most skilful players will have trouble cracking this with an infinite number of continues.

Format:	PlayStation
Publisher:	Banpresto
Developer:	In-house (original code)
Price:	¥5,800 (£40)
Release:	Out now (Japan)





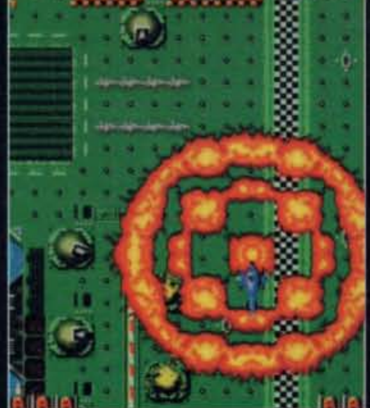


The most enjoyable game of the package is undoubtedly *Twin Cobra* (above left), chiefly because of its twoplayer option. *Tiger Heli* (right-hand column) is the most primitive of the bunch, yet still a fan's favourite

While this compilation is likely to only find favour with people who adored the original coin-ops, *Ultimate Tiger* and its prequel are nevertheless good examples of one game genre which Japanese developers dominated.

Hopefully, *Flying Shark*, *Truxton* and other well-crafted Toaplan games will also make welcome reappearances on similarly styled packages soon. E







Vertically scrolling shoot 'em ups were never renowned for their originality or flair. *Ultimate Tiger* is typical of the genre, offering the essential super-bomb option (above), but remains vintage Toaplan stuff

Namco Museum Volume 4

Namco reaches 'C' in its *Museum* collection, bringing five more coin-ops of old to the PlayStation, some welcome, others less so...

Namco's idea of what constitutes a 'classic' continues to drift further from the mainstream with this penultimate instalment of the current *Museum* series. (Although no one's ruling out a further batch later on – **Edge**, for example, would still like to see *Sky Kid*, *Rolling Thunder* and a few more *Pac-Man* spinoffs get the treatment, for starters).

At least two of the games here will be entirely new names to western gamers, and only *Pac-Land* and *Assault* are likely to provoke recognition from 90% of even the most veteran players.

The most impressive sight on *Volume 4* is obviously the rotating-and-scaling tank game, *Assault*. Essentially *Battlezone* viewed from above, it benefits here from the addition of a simple up-down-left-right control method alongside the original two-joysticks tank-tracks simulation. A very narrow screen dilutes the effect of the graphics somewhat, but if you're one of the few who can get away with turning their TV on its side without making the colours go all purple, full-screen *Assault* is quite something to behold. Its gameplay is basic, but it's as intense as ever.

Ordyne is a cutesy shoot 'em up that actually looks better than PlayStation *Parodius* despite being almost nine years old. It's nevertheless quite an unlikeable game, with short-lived power-ups and heavily armoured baddies (combined with no autofire function) making progress a rather dull matter of remembering, by trial-and-error, which power-ups to buy at which point.

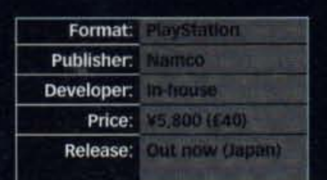
If anything, *Pac-Land* is even harder, but much friendlier with it. Despite a very small number of elements, the platform-centric gameplay manages to stay varied for as long as you manage to survive, which in most players' case will be about halfway through level two, at least during early attempts at play.

The Genji and the Heike Clans is a (mostly) side-scrolling beat 'em up which jumps from style to style in a hard-to-follow, machine-gun manner. It's ultimately best left to Japanese gamers, who will at least be able to make some sense of the screeds of (presumably) explanatory text.

The Return Of Ishtar, a truly bizarre RPG/maze game, brings up the rear. In it, it appears that two characters must be controlled simultaneously (even if you're playing by yourself) with a single controller, using the joypad to move one and the four fire buttons for the other. It's a real test of dexterity, but even when semi-mastered the game itself is all but incomprehensible to English eyes. **Edge** has collected keys and opened doors, but at the moment remains inexplicably unable to actually go through any of them.

Volume 4's general user interface has been improved (it's now possible to switch between games without a tediously long load back to the menu screen), but it remains a much more specialist-taste compilation than any of the earlier volumes.

With import copies fetching around £70, it's patently clear that anyone other than a collector should undertake some serious desire/outlay sums before taking the plunge.



Format:	PlayStation
Publisher:	Namco
Developer:	In-house
Price:	¥5,800 (£40)
Release:	Out now (Japan)

Ordyne





A pretty and lushly hued shooter, but its nuances leave a nasty taste

PacLand



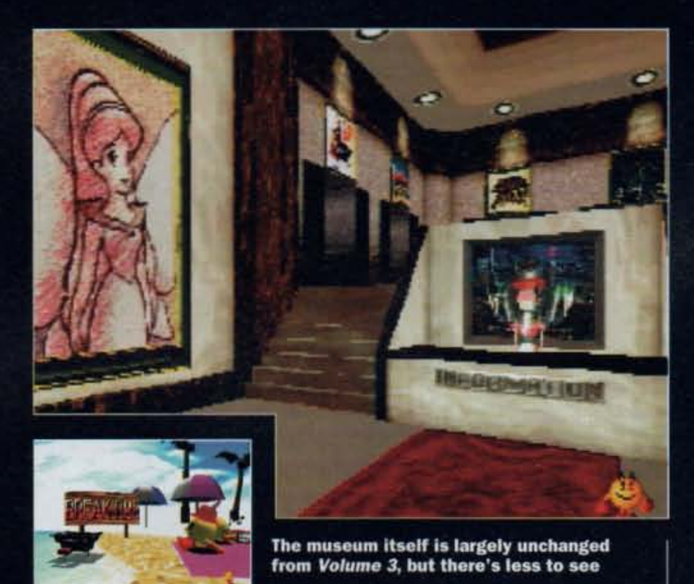


Happy times (above), but soon *Pac-Man*'s very world would collapse

Ishtar



A great test for both manual dexterity and interpretative powers, *Ishtar* is baffling, impenetrable, and hardly worth investing much effort in



The museum itself is largely unchanged from *Volume 3*, but there's less to see

Assault





Experience the joy of taking to the air in a huge and unwieldy tank in *Assault*

Genji





Two different views, but only one formulaic hack 'n' slash scroller



Since acquiring the rights to M2, Matsushita has completely abandoned 3DO M1 yet, incredibly, is talking about an upgrade cartridge. Does this company really expect customer loyalty after about three years without any software support? The opportunities for selling 3DO M1 as a budget machine were massive. Matsushita could have lined up a couple of top CD-ROM conversions – the sort of conversions the Harvard business brains at 3DO told developers to kill. But they didn't want rubbish like *F1GP2*, *Command & Conquer* and *Duke Nukem 3D* – oh no, they wanted quality original software like *SnowJob* and *PO'ed*. Imagine a £100-150 3DO M1 with, say, *F1GP2*. That alone would sell millions and these customers would then be the first adopters of M2. Matsushita had a chance to do this for the last year and a half. Instead, it abandoned the one million original adopters, losing potentially millions of future customers, and its name is mud in the gaming world.

Why not ask the firm about its obligation to existing customers or the release schedule for the original machine? If, as rumoured, Matsushita reneges on the M1 upgrade, will existing owners have any legal rights against it? After all, upgradeability was M1's main selling point during 1995. Hawkins now admits that he had abandoned M1 completely in early '95. It seems that all those adverts published throughout the rest of the year – promising a well-supported machine with its upgrade path faithfully mapped out – were fraudulent.

Edge should really put these questions to Matsushita on behalf of existing owners.

John Mara,
East London

When Matsushita made that $100m deal with 3DO in December last year (see **E**28), the Japanese electronics giant was simply buying the right to develop and market the M2 console – it was not buying a responsibility to M1's existing userbase. Unfortunately, it was The 3DO Company, not Matsushita, which made all those M1/M2 upgrade promises – promises which promptly began to fade as soon as the deal was announced. Recently, Matsushita has talked about releasing an M2 upgrade for the original 3DO console, but this has not been confirmed.

Your suggestions for how M1 could have been handled last year are pertinent but unrealistic. Few people are going to buy a dying console just for one game, no matter how good that game is. Secondly, conversions of titles like *F1GP2* and *Command & Conquer* were already out of the question by mid-'95 – with the 3DO console fading fast, no software developer could have afforded to spare the resources needed for such a precarious project.

Hardware obsolescence is often a painful reality, but it is a reality nonetheless. If companies in the computer industry were held legally accountable every time their vague promises of hardware lastability were proven false, there would be no computer industry. Consumers have two choices: to become infallibly clued up about the industry so that they do not make purchasing errors, or to wait and see how much decent software support a console receives before buying it. Whichever course you choose in future, **Edge** will no doubt prove an invaluable guide.



Did 3DO's autumn '95 advertising campaign highlight the lastability of its console? Whatever the case, John Mara demands some answers

I wholeheartedly agree with George Zachary's recent column on the futility of the 'polygon count' war, but this is only the tip of the iceberg in the problem of comparing competing platforms. If you surf the various gaming websites, you will undoubtedly come across posting after posting taking one aspect of a platform's architecture and using it as ammunition in an ill-considered debate – 'The Saturn has two 32bit processors, therefore it is better than the PlayStation'; 'The N64 is 94MHz'; 'The PlayStation has Gouraud shading', etc.

In reality, the architecture of all the gaming platforms is so diverse that a point-by-point evaluation of each hardware aspect does not reveal there to be a clear 'winner' or 'loser'.

Despite all the hi-tech specs (interesting though they are), the only truly accurate benchmark of a system is to actually go and look and listen to it. Recently I had the privilege of working in the States, and while at an electrical store, I saw *NiGHTS*, *Crash Bandicoot* and *Mario 64* – all leading-edge software on their respective platforms – running side by side. For me, that demonstration laid all hardware arguments to rest.

However, I have to disagree with Mr. Zachary on one point. Since when are 'z-buffered' and 'anti-aliased' adverbs? They're ADJECTIVES, George...

Matthew Gaunt,
matthew_gaunt@stratus.com

With reference to **Edge** 40, and most specifically to the 'Battle of the Bits' article – what a lot of waffling piffle! Was that an article about computer architecture or cars? I am amazed that your 'former SGI' man was able to fill a whole page with such little actual content.

Yes, I know that the optic nerve is saturated at 36bit colour, but how many manufacturers construct video output circuits of this calibre? 24bit colour is only SLOWLY making its way into people's homes.

And anyone with a modicum



Is in-game promotion becoming too blatant? Why should gameplayers pay through the nose for games when companies are recouping some of their costs by using them as a free advertising medium, asks Kevin Wafer

of sense should know that a Saturn is not three times as fast as a PlayStation, if only because of the fact that the latter continues to sell so well.

Next time, can you please avoid marketing men who now run venture-capital firms.

Andrew Payne,
merp@merp.demon.co.uk

I'd like to comment on in-game advertising's increasing role in videogames – for example, Red Bull in *Wipeout 2097* and Pepsi Man in *Fighting Vipers* – or self-publicity, as in Namco's *Ridge Racer Revolution*, which includes blatant advertisements for *Tekken 2* and *Air Combat* on every lap and in unmissable locations.

As an avid gameplayer, I'm becoming sceptical of such ads in games. Players are being advertised to for free: in other words the retail prices of games remain the same whether or not a game is heavily sponsored and full of ads. In comparison, most radio and television channels are 'free' due to advertising. Comparing the games industry with the high-budget film industry: nobody would pay £50 for a film on video, even though they're mostly devoid of thirdparty ads. I accept that most of the movie producers' profits are made at the box office. With coin-op conversions, you could say that most of the development costs and profits were made in the arcade.

Games nowadays supposedly appeal to a large market. In theory, if game producers are receiving revenue from promoting products, game prices should fall. The 'higher development costs' excuse doesn't stand up to reason, due to the economies of scale: more units shifted spreads the development costs.

In my opinion, in-game adverts are more effective than adverts in magazines or on TV: you can always turn the page or change channel during the ad break. So isn't it about time we had price reductions on CD software loaded full of ads? Or is advertising's role just to boost company profits?

After paying £200 for four CD games, the last thing I personally want is a game full of ads tempting me to buy more. On a lighter note, heavy advertising could be the solution to piracy – make profit through the ads and sell the software for a little over the price of a blank CD.

Kevin R Wafer,
Surbiton,
Kingston-Upon-Thames

Software developers use in-game advertising essentially because it's an absolutely no-risk way of making money. If, unlikely as it sounds, *Wipeout 2097* had bombed without a trace, at least Psygnosis could console itself with the cash from Red Bull.

Writing software is a business, not a philanthropic endeavour. Even if games companies did include adverts in their products as some kind of altruistic attempt to bring down the cost for consumers, it's doubtful it would work – price is dictated more by retailers than by developers.

Regarding film advertising, the 20 minutes of trailers (and other ads) that pack the start of rental videos hardly constitutes 'mostly devoid of thirdparty ads', does it?

Ultimately, most consumers find ignoring ads a fairly straightforward process.

I am writing regarding the Saturn's sound capabilities. It was stated in **Edge**'s hardware special that the Yamaha sound chip was extremely good. However, as yet I have found no evidence of this, especially when comparing the sound in Saturn games to that in PlayStation titles. It is, for example, well ▸







Matthew Gaunt argues that comparing the key games of each console, not their raw specs, is the only way to decide which is the strongest

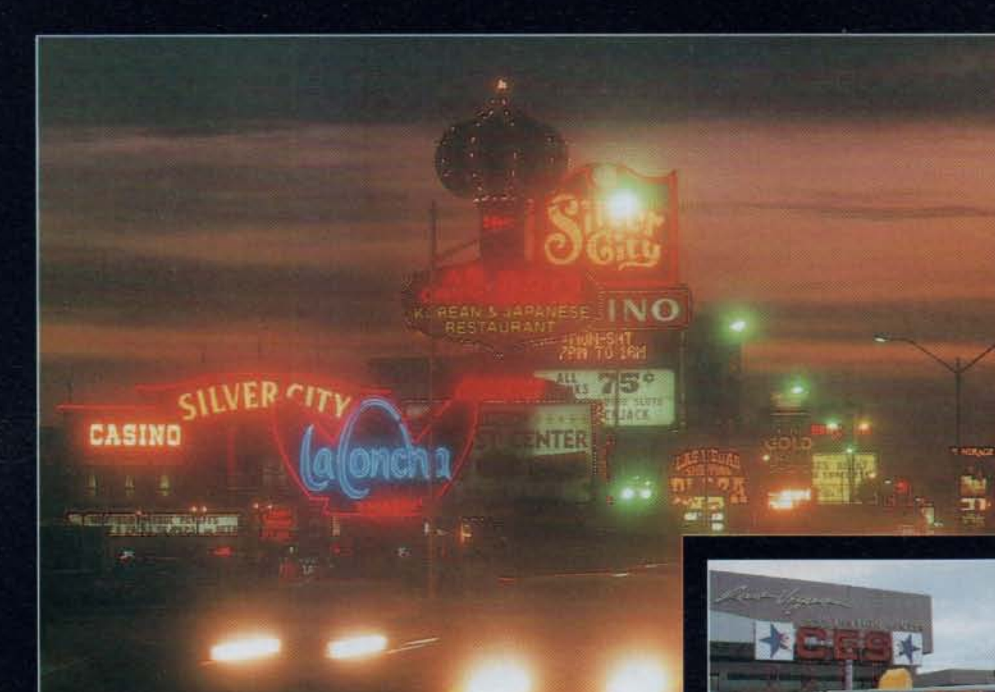
◀ documented that *Tekken*'s sound is superior to *Virtua Fighter 2*'s and that even when comparing titles which have appeared on both formats, like *Tomb Raider* and *Street Fighter Alpha*, the PlayStation sound is distinguishably better.

Is this because the Yamaha chip is not as good as was previously thought, or is it rather that the chip is not being put to good use for whatever reason? Surely, with sound becoming increasingly important to videogames, this is something that Sega needs to address.

Tim Somerville,
Yeovil,
Somerset

In terms of game music, sound quality will usually be exactly the same on both the PlayStation and the Saturn because most games stream music directly from CD. As for in-game sound effects, the PlayStation often provides better sound, but this has nothing to do with 32bit consoles' respective sound chips. As the creator *Tomb Raider*'s music told **Edge**: 'You can generally get away with better sound-effect quality on the PlayStation because the machine has a piece of encryption software which allows you to quadruple the sample rate without increasing the size of the file. Consequently, sounds sampled for the PlayStation play back at 22KHz, 16bit mono, whereas the Saturn usually plays similarly sized samples back at just 11KHz 8bit.'

The attributes of the Yamaha chip are only exploited if playing midi music, which most designers don't bother with. When they do, though, it's impressive – as in *NiGHTS* for example.



Is Las Vegas – American dream or America nightmare according to your point of view – really representative of America, asks Devan Hammack

I would love to write an article about the ridiculous rows over whether current platforms like the PlayStation and Saturn have already reached a limit in terms of programming power. These assumptions are such bullshit – there are people doing Gouraud shading on a Commodore 64 nowadays, so how can we say that the PlayStation, for example, has burned out?

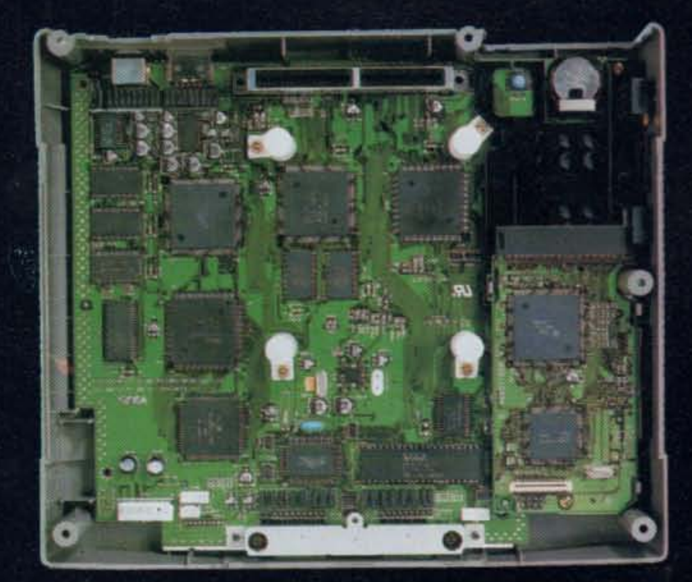
Axel Strohm,
Brainstorm Productions,
Switzerland

Gouraud shading on the C64? Cripes.

Hi, I'm an American (or should I say, 'HOWDY from a YANK'?). I've been reading **Edge** since issue 6 and really like the articles, news, and reviews, but one thing really bugs me. It seems as though you love to take cheap shots and make gross generalisations about Americans and American society.

I would be able to let it go if it happened only every once in a while, but since it happens at least two or three times every issue, I feel I should bring it to your attention that this type of 'editorial' writing isn't appreciated. Take a look at Next Generation (since it's **Edge**'s sister mag). Do they EVER feel the need to add 'those bloody British', or 'maybe they are a bit too SNOBBISH to really appreciate games like *Soviet Strike* on that side of the Atlantic' to their articles? Does saying these things make **Edge** feel better somehow? I'm just asking because it adds absolutely nothing to the content of the magazine. It doesn't add humor (without the 'proper English' spelling, you'll notice), it doesn't add quality, and I'm pretty sure it doesn't impress any other Americans either.

Las Vegas, mentioned in the most recent issue, was made to sound like a city that typified the wasteful culture of America. This could not be further from the truth. In fact, it is such a far stretch to compare Vegas to 99% of the cities in America (or anywhere in the world, for that matter) that I'm surprised anyone would even make that attempt. It's the variety, the same variety I NEVER saw in England while living there for a year, that makes America such an interesting place to live. Oh, and it's also that type of ignorance that makes most English youths think that, since I'm from California, I've never seen snow and I surf every



Tim Somerville points out that Saturn sound is almost always inferior to PlayStation sound. But is this down to the Saturn's architecture?

day. Or even better, it makes your youth say 'England is the BEST COUNTRY IN THE WORLD!' when they have never even been as far as Scotland, Ireland or France.

For another example, on the **Edge** Web page, in the quiz section, the following is part of the first question: 'America's disaffected youth (that's useless layabouts in proper English).' Would proper English, then, call your youths 'a bunch of brawling, drunken, football-loving blokes'?

How much does this phrase add to the question? Is it too funny to leave out? I think not. The funny thing about this example is that I only found it while looking for your address so I could write you about the same subject.

Take some advice: stick to writing the news and reviewing the games. Leave it to comedians to bash cultures, races, and religions (at least they're usually funny about it).

Devan Hammack, hammack@digipen.com or dhammack@aol.com

Two to three anti-American jibes in every issue of **Edge**? Hardly. Such comments aren't used very often and on the rare occasions they are, it's only intended as lighthearted banter.

Besides, US videogames mags are hardly totally objective in their treatment of Europe.

Perhaps you've misinterpreted some of **Edge**'s US-related editorial. Referring to America's disaffected youth as 'useless layabouts', for example, was more of a stab at angst-ridden slackers than Americans in general. As you obviously well know, England has more than its fair share of disaffected youth – in other words, 'useless layabouts' – too.

As for America being more varied than Britain, well, being umpteen times larger would have something to do with that, presumably.

Oh, one final thing: in England, 'brawling, drunken, football-loving bloke' is usually a compliment.

Over the last year it has almost been a regular occurrence that you guys write that Scavenger has good-looking games but they never come out.

We take forever because we want the games to play well. Otherwise we will not sell any copies and will go out of business. We do not have bags of money like the big publishers and they are losing most of it anyway. Acclaim, Virgin, Spectrum, Activision, Crystal Dynamics all lost money this year.

The videogame business is falling into the toilet. We ain't afraid to say it. Years ago there were only a few publishers and anything they put out would sell. Today, things are deadly competitive. Make a game that isn't brilliant and you lose money on that game. No joke, man!

We are 75 guys working hard to make our products as best as we can. Most of my guys go seven days till they burn out and then they work six. And the hours are usually 14 a day. This went on with *Scorcher* for 27 months. It's an unrecognised effort. Other companies pretend they only make 'A' titles. We try to do it.

For years we have hired the very best guys and pushed them to make the very best games. They like Scavenger because we believe in them and give them time to go for the big dream. It takes time. We won't release a game until we feel it is ready and our distributors can complain all day if they want. We are upset that Scavenger should get shit for this. Our past titles (*Subterrania* and *Red Zone*), which also took us a long time, were hits for us.

Please take time to look at *Amok* and *Scorcher* – the collision routine in the latter title took us a year alone – but ultimately it's your call. Please revisit Scavenger after our releases – we feel we deserve it.

Daniel Small, Scavenger, CA, USA

Such an approach to development is laudable. The fruits of such labour will be seen in **E**42 with *Amok* and *Scorcher*.

Now, that's quite enough Americanisms for one month...

Q and A

Rely on Edge to cut through the technobabble. Write to Q&A, Edge, 30 Monmouth Street, Bath, BA1 2BW

Q Sega claims the new *Daytona CCE* runs at 30fps, but Nintendo's *WaveRace 64* only runs at 20fps or so. Why is this? Surely the Nintendo machine has superior power to the 32bit Sega (and the PlayStation). Please put my mind at rest regarding the specs of these three machines.

Richard Johnson, High Wycombe, Bucks

A Actually, this is misleading. Contrary to what Edge has printed regarding the frame rate of *WaveRace 64*, it does actually run at 30fps, although the high game speed gives the impression that it skips more frames than, say, *Daytona CCE* – plus the fact that the game does slow down to 20fps when the screen becomes congested. In fact, because most TVs can only display frame rates in regulated steps – at 20fps, 30fps, 60fps, etc – it's impossible for a console game to run at something like 23fps. The machine may be *calculating* that many frames but what you'll see on the screen will be either 20fps or 30fps.

With specific regard to *WaveRace*, Nintendo is using a *lot* of polygons to render the realistic water (possibly as many as 600 per frame), which explains the performance hit when the screen gets busy and not really any 3D deficiency when compared to the PlayStation.

Q **1**. I'm considering having my N64 converted to RGB – it's currently running on a 25" Sony Trinitron NTSC-compatible set through an S-Video lead. Will an RGB conversion vastly improve the picture quality and is it worth £30?
2. Any news on whether Psygnosis is planning to develop for the N64?
3. Will Tim Follin be writing the soundtracks for Software Creations' N64 titles?
4. When do Nintendo plan to release the 64DD drive in Japan and what will it cost?
5. How much will software (using disc only) for the 64DD drive cost?

Seth Eagles, Caernarfon, Gwynedd

A **1**. No, but RGB is the best-quality picture you can get – it just won't be *that* much better than S-Video.
2. The company has plans to make games for the N64 but has not announced details of any licence yet.
3. Tim Follin no longer works for Software Creations and his lack of interest in programming chip music means that it's doubtful his talents will ever grace the Nintendo 64.
4. The 64DD will be released in Japan in late 1997 – a good estimate would be in November to coincide with the release of *Zelda 64* – whose precursors have traditionally debuted on the 21st of that month.
5. Don't expect a huge saving, although games may be priced more in line with that of CD games from Sony and Sega. Expect something more in the region of ¥5,000-¥7,000 (£30-42).

Q I am considering buying an N64 and have been in contact with a few mail-order companies who deal in imported consoles. But I have a some queries. Three of these companies told me I would be best off getting a US Nintendo for £399, complete with one control pad and a copy of *Mario 64*. However, I rang Loaded Consoles and they said I could get a Japanese N64 with one control pad and *Mario 64* for £299. They also said I would have to pay £40 extra to get my N64 RGB converted, and then I could only play it on a SCART TV. The points I hope you can help me with are:
1. Should I wait for the UK release of the N64?
2. If I was going to purchase an N64, should I go for an American or Japanese model?
3. Do I need to have the Nintendo 64 RGB converted?
4. The power plugs on American and Japanese N64s are different to the British variety. If I get an imported N64, will I have any problems?
5. If I choose to buy a Japanese N64, will it affect gameplay, as the writing on the screen will be in Japanese?

David Jepson, New Houghton, Mansfield

A **1**. If you want a UK machine and UK software then obviously wait for the official launch. It all depends whether you're fussy about screen borders, slightly reduced game speed and titles often not being released until much later than in Japan and the US – all factors that hampered the success of the Super NES in the UK.
2. Both machines will run each other's software (after a minor operation) so it makes little difference unless you are buying as part of a package and want English text in your games.
3. Only if your TV is *not* NTSC compatible – see previous issues for more details on this.
4. Most import companies now supply Japanese and US N64s complete with a UK power pack and SCART lead.
5. Even relatively straightforward N64 games such as *Mario 64* have large chunks of Japanese text, and it certainly affects gameplay.



In 1979, bedroom programmer Richard Garriot took the paper-and-pencil RPG and dragged it kicking and screaming into the digital age. *Ultima* was the result. Now, eight sequels later, his company, Origin Systems, is one of the largest videogame developers in the US. Next month, Edge visits Garriot's HQ in Austin, Texas and talks to the man himself about the company's future and the possible demise of the game that made him rich. Is this the end for *Ultima*?

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